

**This book is with
tight
Binding**

Baedeker's
CANADA

Haedeker ~~card~~
Dominion of Canada

917.1

B 14

KEEP YOUR CARD IN THIS POCKET

Books will be issued only on presentation of proper library cards.

Unless labeled otherwise, books may be retained for two weeks, subject to renewal for a like period. Borrowers finding book marked, defaced or mutilated are expected to report same at library desk; otherwise the last borrower will be held responsible for all imperfections discovered.

The card holder is responsible for all books drawn on this card.

No books issued unless fines are paid.

Lost cards and change of residence must be reported promptly.



**PUBLIC LIBRARY,
KANSAS CITY, MO.**

KEEP YOUR CARD IN THIS POCKET

THE
DOMINION OF CANADA

THE
DOMINION OF CANADA

WITH
NEWFOUNDLAND AND AN EXCURSION TO ALASKA

HANDBOOK FOR TRAVELLERS

BY

KARL BAEDEKER


WITH 13 MAPS AND 12 PLANS

THIRD REVISED AND AUGMENTED EDITION

LEIPZIG: KARL BAEDEKER, PUBLISHER
LONDON: T. FISHER UNWIN, 1 ADELPHI TERRACE, W C.
NEW YORK: CHARLES SCRIBNER'S SONS, 153/7 FIFTH AVE.
TORONTO: WM. TYRRELL & CO, 7 AND 9 KING ST E

1907.

'Go, little book, God send thee good passage,
And specially let this be thy prayers
Unto them all that thee will read or hear,
Where thou art wrong, after their help to call
Thee to correct in any part or all'.



KANSAS CITY, MO PUBLIC LIBRARY



0 0001 0153051 7

PREFACE.

THE *Handbook to Canada* is intended to help the traveller in planning his tour and disposing of his time to the best advantage, and thus to enable him the more thoroughly to enjoy and appreciate the objects of interest he meets with. The writer is *Mr J. F. Muirhead, M. A.*, author of the companion volume on the *United States*, who has personally visited the greater part of the districts described.

No one is better aware than the Editor himself of the inevitable imperfections in the early editions of a guidebook; and the vast extent of the Dominion of Canada has made the preparation of the present volume a peculiarly difficult task. He has not attempted to give more than a few suggestions and hints for the traveller's guidance in the less-known parts of the territory, where a journey still necessarily assumes something of the nature of an exploration. In such cases a book cannot take the place or perform the services of a living guide. The Editor hopes that the present volume will continue to share in the advantages that accrue to the whole series of his Handbooks from the valuable and highly appreciated corrections and suggestions of the travelling public.

In the preparation of the Handbook the Editor has received most material aid from friends in all parts of the Dominion. In particular he wishes to express his obligations to the Dominion and Provincial ministers and officials, to the superior officials of the leading Railway Companies, and to the librarians of the Parliamentary Library at Ottawa. Grateful acknowledgments are also specially due, in addition to those individuals mentioned throughout the Handbook, to *Dr. Benjamin Rand* of Cambridge (Mass.); *Mr W. D. Light-hall*, *Mr. Albert J. Brown*, *Professor Alexander Johnson*, *Mr. C. H. Gould*, and the *Abbé Verreau*, of Montreal; *Sir J. M. Le Moine*, the *Abbé Laflamme*, *Major William Wood*, *Mr. E. T. D. Chambers*, *Mr. Frank Carrel*, and *Mr. H. M. Price*, of Quebec; *Professor Mavor*, *Professor David R. Keys*, and *Mr. James Bain*, of Toronto; *Dr. Samuel E. Dawson*, *Dr. Reginald Daly*, *Mr. E. W. Thomson*, *Mr. W. D. Le Sueur*, *Dr. Doughty*, and *Mr. F. A. Dixon*, of Ottawa; *Mr. J. J. Stewart* and *Mr. F. Blake Crofton*, of Halifax; the *Rev. W. O. Raymond*, of St. John; *Mr. Frederick M. Stirling* and

Judge Prowse, of St. John's, Newfoundland; *Mr. A. O. Wheeler*, of Calgary; *Mr. J. S. Hendrie* and *Mr. John T. Hall*, of Hamilton; the *Rev. Father Lemieux*, Tadousac; *Lieut. Col. Ruttan* and *Mr. F. W. Heubach*, of Winnipeg; *Mr. W. E. Flumerfelt*, of Vancouver; and *Mr. Herbert Cuthbert*, of Victoria.

The introductory articles by *Sir John Bourinot*, *Dr. George Dawson*, and *Messrs. Fuller and Chambers* will, it is hoped, be found of material value to the tourist. An intelligent comprehension of the subjects of which they treat will undoubtedly add greatly to the zest of a visit to Canada.

On the MAPS and PLANS the Editor has bestowed especial care; and it is believed that in this respect the Handbook is more completely equipped than any other publication of the kind relating to Canada. Such merit as they possess is largely due to the kind and efficient coöperation of *Mr. Edouard Deville*, Surveyor General of Dominion Lands, and *Mr. James White*, Geographer of the Department of the Interior. The present edition has been enriched by three new maps and five new plans.

The POPULATIONS are those of the census of 1901; but it should be borne in mind that these are often very much below the present figures.

HOTELS. The Editor has endeavoured to enumerate, not only the first-class hotels, but also the more deserving of the cheaper houses. The comfort of a Canadian hotel is, however, much more likely to be in the direct ratio of its charges than is the case in Europe (comp. p. xix). Although changes frequently take place, and prices generally have an upward tendency, the average charges stated in the Handbook will enable the traveller to form a fair estimate of his expenditure. The value of the asterisks, which are used as marks of commendation, is relative only, signifying that the houses are good of their kind.

To hotel-proprietors, tradesmen, and others the Editor begs to intimate that a character for fair dealing and courtesy towards travellers forms the sole passport to his commendation, and that advertisements of every kind are strictly excluded from his Handbooks. Hotel-keepers are also warned against persons representing themselves as agents for Baedeker's Handbooks.

CONTENTS.

	Page
I. Money. Expenses. Passports. Custom House. Time	xi
II. Voyage from Europe to Canada	xii
III. Railways. Steamers. Coaches	xiii
IV. Plan and Season of Tour	xvi
V. Hotels and Restaurants	xix
VI. Post and Telegraph Offices	xxi
VII. Chief Dates in Canadian History	xxii
VIII. The Constitution of Canada, by <i>Sir J. G. Bourne</i> . .	xxvi
IX. Geographical and Geological Sketch, by <i>G. M. Dawson</i> .	xxxiii
X. Sports and Pastimes, by <i>E. T. D. Chambers</i> and <i>W. H. Fuller</i>	xlix
XI. Bibliography	lxi

Route	I. Approaches to Canada.	
1. The Trans-Atlantic Voyage		2
2. From New York to Montreal		9
3. From Boston to Montreal		17
4. From New York to Quebec via Springfield		20
5. From Boston to Quebec		21
6. From New York to Toronto		21
7. From Boston to the Maritime Provinces by Sea		22
8. From Boston to St. John by Railway		24
9. From Portland to Montreal and Quebec		25

	II. New Brunswick.	
10. St. John		27
11. From St. John to Fredericton		33
12. From Fredericton to Woodstock		39
13. From Woodstock to Grand Falls and Edmundston		40
14. From St. John to St. Stephen and St. Andrews		41
15. Campobello and Grand Manan		44
16. From St. John to Montreal		46
17. From St. John to Quebec (Lévis)		48

	III. Nova Scotia.	
18. Halifax		50
19. From Halifax to Sydney. Cape Breton. Bras d'Or Lakes. Louisbourg		59
20. From Halifax to St. John		71
21. From Halifax to Yarmouth		78

Route	Page
22. From Digby to Yarmouth	82
23. From Windsor to Truro	82
24. From Halifax to Quebec (Lévis) by Railway	83

IV. Prince Edward Island and Newfoundland.

25. Prince Edward Island	97
26. Newfoundland	102
27. St. Pierre and Miquelon	124

V. Quebec.

28. Montreal	125
29. From Montreal to Quebec	139
30. Quebec	145
31. Excursions from Quebec (Lévis, Isle of Orleans, Falls of Montmorency and Ste. Anne de Beaupré, Lorette, Charlesbourg, Lake Beauport, Lake St. Charles) . . .	157
32. From Quebec to Lake St. John and Chicoutimi . . .	161
33. From Quebec to Chicoutimi. The Saguenay	166

VI. Ontario.

34. From Montreal to Ottawa	174
35. Ottawa	176
36. From Ottawa to Kingston by Steamer	183
37. From Ottawa to Montreal by Steamer	184
38. From Montreal to Toronto	186
39. Toronto	190
40. From Toronto to North Bay. Muskoka District	197
41. From Ottawa to Depot Harbour (Parry Sound)	203
42. From Toronto to Detroit	205
43. From Toronto to Niagara (and Buffalo)	208
44. From Detroit to Buffalo	212
45. Niagara Falls	215
46. From Toronto to Owen Sound and Fort William	222
47. From Toronto to Montreal by Steamer. The St. Lawrence River and the Thousand Islands	226
48. From Montreal to Port Arthur and Fort William	230
49. From North Bay to New Liskeard. Temagami Region . . .	237

VII. Western and North-Western Provinces.

50. From Fort William and Port Arthur to Winnipeg	242
51. Winnipeg	245
52. From Winnipeg to Banff	250
53. From Winnipeg to Edmonton via Canadian Northern Railway	262

Route	Page
54. From Dunmore Junction to Lethbridge and Kootenay Landing	266
55. From Banff to Vancouver	268
56. From Revelstoke to Arrowhead, Robson, and Nelson. Kootenay Region	287
57. From Vancouver to Victoria	289

VIII. Alaska and the Yukon.

58. From Victoria to Sitka. The Yukon Region	293
Grand Trunk Pacific Railway	307
Index.	309

Maps.

1. RAILWAY MAP OF SOUTHERN CANADA, before the title-page (1 : 10,000,000).
2. ENVIRONS OF NEW YORK; p. 10 (1 : 210,000).
3. THE MARITIME PROVINCES; p. 58 (1 : 2,200,000).
4. NEWFOUNDLAND, p. 103 (1 : 4,500,000).
5. PROVINCE OF QUEBEC, from Quebec to Ottawa; p. 138 (1 : 2,000,000)
6. THE SAGUENAY RIVER AND LAKE ST. JOHN, p. 170 (1 : 1,750,000).
7. PROVINCE OF ONTARIO, from Ottawa to Parry Sound and Hamilton, p. 186 (1 : 2,000,000).
8. LAKE ERIE AND ENVIRONS, from Toronto to Saginaw Bay and Toledo; p. 204 (1 : 2,000,000).
9. ST. MARY'S RIVER, p. 224 (1 : 400,000).
10. ENVIRONS OF BANFF; p. 259 (1 : 282,000).
11. THE SELKIRK RANGE: p. 275 (1 : 250,000).
12. COAST OF BRITISH COLUMBIA AND ALASKA; p. 292 (1 : 4,500,000).
13. GENERAL MAP OF BRITISH NORTH AMERICA; after the Index (1 : 20,000,000).

Plans.

1. HALIFAX (p. 50). — 2. HAMILTON (p. 210). — 3. MONTREAL (p. 126) — 4. NIAGARA (p. 215). — 5. OTTAWA (p. 177) — 6. QUEBEC (p. 145). — 7. ST. JOHN (p. 27). — 8. SAULT STE. MARIE (p. 224). — 9. TORONTO (p. 190). — 10. VANCOUVER (p. 285). — 11. VICTORIA AND ESQUIMALT (p. 290). — 12. WINNIPEG (p. 245).

ABBREVIATIONS.

Abbreviations.

R. = Room, Route; B. = Breakfast; D. = Dinner; L. = Luncheon; Rfmts. = refreshments. — N. = North, Northern, etc.; S. = South, etc.; E. = East, etc.; W. = West, etc. — M. = English (or American) Mile; ft. = Engl. foot; min. = minute; hr. = hour; ca. = circa, about. — Ho. = House; Hot. = Hotel; Ave. = Avenue; St. = Street; R.R. = railroad; Mt. = Mountain. — U. S. = United States; P. Q. = Province of Quebec; Ont. = Ontario; N. B. = New Brunswick; N. S. = Nova Scotia; P. E. I. = Prince Edward Island; Man. = Manitoba; Alta. = Alberta; Sask. = Saskatchewan; N. W. T. = North-West Territories; B. C. = British Columbia.

The letter *d* with a date, after the name of a person, indicates the year of his death. The number of feet given after the name of a place shows its height above the sea-level. The number of miles placed before the principal places on railway-routes indicates their distance from the starting-point of the route.

ASTERISKS are used as marks of commendation.

INTRODUCTION.

'A daughter in her mother's house,
But mistress in her own.' *Kipling.*

I. Money. Expenses. Passports. Custom House. Time.

Money. The currency of the Dominion of Canada is arranged on a decimal system similar to that of the United States, the unit being the dollar (\$), divided into 100 cents (c). Canada has no gold coins of its own, but the gold coins of the United States are current at par and British gold coins pass at the rate of 1*l* = \$4. 86²/₃. The silver coins are the half-dollar (50 c.), the quarter-dollar (25 c. = 1*s.*), and pieces of 20 c., 10 c., and 5 c. The bronze coins are of the value of 1 c. (1/2*d.*) and 2 c. (1*d.*). The cent, for purposes of calculation, is divided into 10 mills, but there are no coins of this denomination. The 20 c. piece, the main function of which seems to be the deception of the unwary stranger by its resemblance to a 'quarter' (the Sovereign's head, however, has a wreath instead of a crown), is no longer coined, and is seldom met with, except in the Maritime Provinces and Newfoundland. The *Government Paper Currency* consists of notes of the denomination of 25 c. (seldom seen and not now issued), \$1, \$2, and \$4. The chartered and incorporated banks of the Dominion issue notes for \$5 and multiples of that sum, which are payable at par throughout Canada. For practical purposes the dollar may be reckoned as 4*s.* and \$5 as 1*l.*, though (see above) the actual rate of exchange for 1*l.* is \$4. 86²/₃ (or \$1 = ca. 4*s.* 2*d.*).

The European or United States visitor to Canada will find it convenient to carry his money in the form of letters of credit or circular notes, which are readily procurable at the principal banks. British and American silver coins circulate throughout the Dominion at a depreciation of 20 per cent (1*s.* or 25 c U S. currency = 20 c.); and travellers should be on their guard against accepting American silver coins at par value. In many of the larger cities, however (*e.g.* Montreal), American silver is accepted at its face value. In a few places (comp. p. 67) French gold or silver coins are accepted at the rate of 1 franc = 16 c. Bank of England notes are usually taken at their full value in the larger cities, but United States paper is often refused.

Post Office Orders (see p. xx1) afford a convenient vehicle for the transmission of small sums, and similar *Money Orders* are issued by the large Express Companies (p. xvi), which also transmit money by telegraph.

Expenses. The expenses of a visit to Canada depend, of course, on the habits and tastes of the traveller, but may be said, roughly speaking, to be much the same as those of European travel (except in respect of the greater distances to be traversed) and considerably less than those of the United States. The hotels which charge as much as \$5 a day can be numbered on one's fingers, and the average hotel expenses will not exceed \$3 a day, while in some parts of the Dominion (*e.g.* Nova Scotia) they will be less than that. Persons of

moderate requirements, by frequenting boarding-houses instead of hotels and avoiding carriage-hire as much as possible, may travel comfortably (exclusive of long continuous journeys) for \$4-6 a day, but it would be safer to reckon on a daily expenditure of \$7-8 (28-32s.) An entire day (24 hrs.) spent in the train (i.e. a journey of 400-800 M.) costs, with Pullman car accommodation and meals, about \$15-20 (3-4*l.*) The expenses of locomotion can often be materially diminished by travelling by water instead of by land.

Passports are not necessary in Canada.

Custom House. The custom-house examination of the luggage of travellers entering Canada is generally conducted courteously but often with considerable minuteness. Nothing is admitted free of duty, except the personal effects of the traveller, and unusually liberal supplies of unworn clothing are apt to be regarded with considerable suspicion. The traveller should be careful to 'declare' everything he has of a dutiable nature (tobacco, cigars, spirits, photographic plates, etc.), as otherwise it is liable to confiscation. Persons visiting Canada for a limited time may bring in guns, bicycles, cameras, fishing tackle, and the like for their own use on depositing a sum equal to the duty, which is returnable on departure from the country. If desired, articles may be forwarded in bond to any point in Canada where a customs-officer is stationed.

In accordance with an Act of 1903 a head-tax of \$2 may be levied on every foreigner entering the United States, with the exception of citizens of Canada, Newfoundland, Mexico, and Cuba. This tax is generally included in the passage-money paid by travellers reaching the United States by sea, but Europeans may have to pay it each time they cross the frontier from Canada.

Time. For the convenience of railways and others a *Standard of Time* for Canada has been agreed upon and a system adopted by which the country is divided into five sections, each (theoretically) of 15° of longitude (1 hr.) and corresponding to the similar divisions of the United States. *Atlantic Time*, or that of the 60th Meridian, prevails from the Atlantic coast to (roughly speaking) a line running through Campbellton (p. 91). *Eastern Time*, or that of the 75th Meridian, 1 hr. slower, extends thence to Fort William (p. 236). *Central Time* (of Meridian 90), extends thence to Brandon (p. 251). *Mountain Time* (105° long.) extends thence to Laggan (p. 268). *Pacific Time* (120°) covers the rest of the country. Thus noon at Montreal is 11 a.m. at Winnipeg, 10 a.m. at Calgary, and 9 a.m. at Vancouver or Victoria. True local or mean solar time may be anywhere from 1 min. to 30 min. ahead of or behind the standard time; and in some cases, where the ordinary clocks keep local time and the railway clocks keep standard time, the results are confusing.

II. Voyage from Europe to Canada.

The chief routes from Europe to Canada are briefly described in R. 1; and the steamers of any of the companies there mention-

ed afford comfortable accommodation and speedy transit. The fares vary considerably according to the season and the character of the vessel, but the extremes for a saloon-passage may be placed at \$60 (12*l.*) and \$500 (100*l.*), the latter sum securing a suite of deck-rooms on the largest, finest, and quickest boats in the service. The average rate for a good stateroom in a good steamer may be reckoned at \$65-125 (13-25*l.*). The intermediate or second cabin costs \$40-65 (8-13*l.*), the steerage \$25-30 (5-6*l.*). The slowest steamers, as a general rule, have the lowest fares, and they often offer as much comfort as the 'ocean greyhounds.'

The average duration of the passage across the Atlantic is 6-9 days. The best time for crossing is in summer. Passengers should pack clothing and other necessities for the voyage in small flat boxes (*not* portmanteaus), such as can lie easily in the cabin, as all bulky luggage is stowed away in the hold. Stateroom trunks should not exceed 3 ft. in length, 1½-2 ft. in breadth, and 15 inches in height. Trunks not wanted on board should be marked 'Hold' or 'Not Wanted', the others 'Cabin' or 'Wanted'. The steamship companies generally provide labels for this purpose. Dress for the voyage should be of a plain and serviceable description, and it is advisable, even in midsummer, to be provided with warm clothing. A deck-chair, which is a luxury that may almost be called a necessary, may be purchased before starting (from 6*s.* or 7*s.* upwards) but is now more often hired from the deck-steward (2-4*s.*). If bought, it should be distinctly marked with the owner's name or initials, and may be left in charge of the Steamship Co.'s agents until the return-journey. Seats at table, retained throughout the voyage, are usually assigned by the Saloon Steward immediately after starting, and those who wish seats at a particular table or beside particular persons should apply to him. It is usual to give a fee of 10*s.* (2½ dollars) to the table-steward and to the stateroom-steward, and small gratuities are also expected by the boot-cleaner, the bath-steward, etc. The customary fees are, of course, much lower in the second cabin.

On arrival at Montreal, Halifax, or New York, passengers' luggage is examined in a covered hall adjoining the wharf. After the examination the traveller may hire a carriage to take himself and his baggage to his destination, or he may send his trunks by a transfer-agent or express man (see p. xvi) and go himself on foot or by tramway. Telegraph messengers and representatives of hotels also meet the steamers. The traveller should know the exact telegraph-rates (comp. pp. xxi, 10), as mistakes (not to his advantage) sometimes occur.

III. Railways. Steamers. Coaches.

Railways. The Dominion of Canada now contains about 20,600 M. of railway, or about one-tenth less than the United Kingdom. Fully two-thirds of the entire amount are in the hands of the *Canadian Pacific Railway* (8298 M. in 1905), the *Grand Trunk Railway* (3111 M.), the *Canadian Northern System* (1880 M.), and the Government (1449 M.). The capital invested in railways amounted in 1905 to about \$248,666,000 (259,733,200*l.*), of which about 20 per cent had been contributed by state and municipal aid. In the same year the railways carried 25,288,723 passengers and 50,893,957 tons of freight. The total receipts were \$106,467,199 showing a surplus of about 25 per cent over operating expenses. The standard gauge (4 ft. 8½ in.) is in use by almost all the railways of Canada. — For a note on the new *Grand Trunk Pacific Railway*, see p. 307.

The equipments of the Canadian railways are similar to those of the United States lines, which, as is well known, are very different from those of European railways. Instead of comparatively small coaches, divided into compartments holding 6-8 people each, the American railways have long cars (like an enlarged tramway-car), holding 60-70 pers., entered by doors at each end, and having a longitudinal passage down the middle, with the seats on each side of it. Each seat has room for two passengers. All long-distance trains are furnished with drawing-room (parlor) cars by day and sleeping-cars at night, which accommodate about 24-30 people in the same space as the ordinary cars, and are in every way much more comfortable. Second-class carriages are much more often provided in Canada than in the United States, and emigrant carriages are also found on some long-distance trains. The second-class cars, however, are not recommended, and certainly do not rank higher than the third-class carriages of Europe. Smoking is not permitted, except in the cars ('Smokers') specially provided for the purpose and generally found at the forward end of the train. Smoking-compartments are also usually found in the parlor-cars. The vexed question of whether the American or the European railway-carriage is the more comfortable is hard to decide. It may be said generally, however, that the small-compartment system would never have done for the long journeys of America, while the parlor-cars certainly offer greater comfort in proportion to their expense than the European first-class carriages do. In comparing the ordinary American or Canadian car with the second-class or the best third-class carriages of Europe, some travellers may be inclined to give the preference for short journeys to the latter. The seats in the American cars offer very limited room for two persons, and their backs are too low to afford any support to the head; a single crying infant or spoiled child annoys 60-70 persons instead of the few in one compartment; the passenger has little control over his window, as someone in the car is sure to object if he opens it; the continual opening and shutting of the doors, with the consequent draughts, are annoying; the incessant visitation of the train-boy, with his books, candy, and other articles for sale, renders a quiet nap almost impossible; while, in the event of an accident, there are only two exits for 60 people instead of six or eight. On the other hand, the liberty of moving about the car, or, in fact, from end to end of the train, the toilette accommodation, and the amusement of watching one's fellow-passengers greatly mitigate the tedium of a long journey, while the publicity prevents any risk of the railway crimes sometimes perpetrated in the separate compartments of the European system. Rugs, as a rule, are not necessary, as the cars are apt to be over, rather than under, heated. Little accommodation is provided in the way of luggage-racks, so that travellers should reduce their hand-baggage to the smallest possible dimensions. — In the sleeping-car, the passenger engages a *Half-Section*, consisting of a so-called 'double berth', which, however, is rarely used by more than one person. If desirous of more air and space, he may engage a whole *Section* (at double the rate of a half-section), but in many cases a passenger is not allowed to monopolize a whole section to the exclusion of those not otherwise able to find accommodation. Parties of 2-4 may secure *Drawing Rooms*, or private compartments. A lower berth is generally considered preferable to an upper berth, as it is easier to get into and commands the window; but, by what seems a somewhat illiberal regulation, the upper berth is always let down, whether occupied or not, unless the whole section is paid for. So far nothing has been done towards reserving a special part of the car for ladies, except in the shape of a small toilette and dressing room. The so-called *Tourist Sleeping Cars*, found on some lines, are fairly comfortable and may be used with advantage by those to whom economy is important; the *Colonist Cars* have wooden bunks only, without bedding. — *Dining Cars* are often attached to long-distance trains, and the meals and service upon them are frequently better than those of the railway-restaurants. — Tickets are collected in the train by the *Conductor* (guard), who sometimes gives numbered checks in exchange for them. Separate tickets are issued for the seats in parlor-cars and the berths in sleeping-cars; and

such cars generally have special conductors. Fees are not usual, except to the coloured *Porters* of the parlor-cars, who brush the traveller's clothes and (on overnight journeys) boots, and expect about 25 c a day. In Canada the traveller is left to rely upon his own common sense still more freely than in England, and no attempt is made to take care of him in the patriarchal fashion of European railways. He should, therefore, be careful to see that he is in his proper car, etc. The conductor calls 'all aboard', when the train is about to start, and on many lines a warning bell is rung. The names of the places passed are not always shown distinctly (sometimes not at all) at the stations, and the brakeman, whose duty it is to announce each station as the train reaches it, is apt to be entirely unintelligible. A special word of caution may be given as to the frequent necessity for crossing the tracks, as the rails are often flush with the floor of the station and foot-bridges or tunnels are rarely provided. Each locomotive carries a large bell, which is tolled as it approaches stations or level ('grade') crossings — The speed of Canadian trains is generally lower than that of English trains; and over a large portion of the country it does not exceed 20-25 M. per hour even for through-trains.

The average rate of *Fare* may be stated at about 3 c per mile, though the rate is lower for season, 'commutation' (good for so many trips), or mileage tickets. The extra rate for the palace-cars ($\frac{1}{2}$ -1 c. per mile) is low as compared with the difference between the first and third class fares in England, and the extra comfort afforded is very great. Return-tickets ('excursion' or 'round trip' tickets) are usually issued at considerable reductions. The thousand-mile tickets, from which the conductor collects coupons representing the number of miles travelled, are a convenient arrangement which European railways might do well to introduce. A distinction is frequently made between 'Limited' and 'Unlimited' tickets, the former and cheaper admitting of continuous passage only, without 'stopovers'; and the latter being available until used and admitting of 'stopovers' at any place on the route. — At the railway-stations, the place of the first, second, and third class waiting-rooms of Europe is taken by a *Ladies' Room*, to which men are also generally admitted if not smoking, and a *Men's Room*, in which smoking is usually permitted.

Among the *American Railway Terms* with which the traveller should be familiar (in addition to those already incidentally mentioned) are the following. *Railroad* is generally used instead of railway (the latter term being more often applied to street railways, i.e. tramways), while the word 'Road' alone is often used to mean railroad. The carriages are called *Cars*. The *Conductor* is aided by *Brakemen*, whose duties include attention to the heating and lighting of the cars. A slow train is called an *Accommodation* or *Way Train*. The *Ticket Office* is never called booking-office. Luggage is *Baggage*, and is expedited through the *Baggage Master* (see below). *Depot* is very commonly used instead of station, and in many places the latter word, when used alone, means police-station. Other terms in common use are *turn-out* = siding; *bumper* = buffer, *box-car* = closed goods-car; *caboose* = guard's van; *freight-train* = goods train; *cars* = train; *to pull out* = to start; *way station* = small, wayside station; *cow-catcher* = fender in front of engine; *switch* = shunt; *switches* = points. — The only general railway-guide of Canada is the *International Railway Guide*, published at Montreal monthly (price 25 c.), which includes a useful gazetteer of Canadian towns and villages. Local collections of time-tables are everywhere procurable, and those of each railway-company may be obtained gratis at the ticket-offices and in hotels. The more important railway-companies publish a mass of 'folders' and descriptive pamphlets, which are distributed gratis and give much information about the country traversed. These are often very skilfully prepared and well illustrated.

Luggage. Each passenger on a Canadian railway is generally entitled to 150 lbs. of luggage ('baggage') free. The so-called *Check System* makes the management of luggage very simple. On arrival at the station, the traveller shows his railway ticket and hands over his impedimenta to the Baggage Master, who fastens a small metal or cardboard tag to each article and gives the passenger similar 'checks' with corresponding numbers. The

railway-company then becomes responsible for the luggage and holds it until reclaimed at the passenger's destination by the presentation of the duplicate check. As the train approaches the larger cities a *Transfer Agent* sometimes walks through the cars, undertaking the delivery of luggage and giving receipts in exchange for the checks. The charge for this is usually 25 c. per package, and it is thus more economical (though a composition may sometimes be effected for a number of articles) to have one large trunk instead of two or three smaller ones. The hotel-porters who meet the train will also take the traveller's checks and see that his baggage is delivered at the hotel. In starting, the trunks may be sent to the railway-station in the same way, either through a transfer-agent or the hotel-porter, and if the traveller already has his railway-ticket they may be checked through from the house or hotel to his destination. Baggage, unaccompanied by its owner, may be sent to any part of the country by the *Express Companies* (comp. p. 127), which charge in proportion to weight and distance. The drawbacks to the transfer-system are that the baggage must usually be ready to be called for before the traveller himself requires to start, and that some delay generally takes place in its delivery; but this may, of course, be avoided by the more expensive plan of using a carriage.

Steamers. The extensive system of lakes, navigable rivers, and canals in Canada affords many opportunities of exchanging the hot and dusty railway for the cheaper and cooler method of locomotion by water. The steamers of the C.P.R. on the Great Lakes (see pp. 224-226) rank with the finest passenger-steamers for inland navigation in the world, and the boats of many other companies (comp. RR. 19b, 21b, 26, 33, 43a, 47, 57, 58) afford fairly comfortable accommodation. An entire day on a steamer, including berth and meals, rarely costs more than \$10 and often costs much less. — For the oceanic steamboat-lines connecting Canada with the United States in summer, see R. 7.

Coaches. The ordinary tourist will seldom require to avail himself of the coach-lines of Canada, for which he may be thankful, as the roads are generally rough, the vehicles uncomfortable, and the time slow. The fares are usually moderate. Some of the coach-trips in the Far West (comp. pp. 281-282) may, however, be recommended to those who do not object to rough it a little.

Carriages. Carriage-hire is generally considerably lower in Canada than in the United States, and is sometimes distinctly cheap. Fares vary so much that it is impossible to give any general approximation, but the data throughout the text will give the traveller most of the information he requires on this point. When he drives himself in a 'buggy' or other small carriage, the charges are relatively much lower than when he employs a coachman.

Electric Tramways. There are about 50 electric railways in Canada, with about 800 M. of track and carrying 22 million passengers annually. The most important are duly mentioned in the text.

IV. Plan and Season of Tour.

The PLAN OF TOUR must depend entirely on the traveller's taste and the time he has at his disposal. It is manifestly impossible to cover more than a limited section of so vast a territory in an ordinary travelling-season; but the enormous distances are practically much

diminished by the comfortable arrangements for travelling at night (comp. p. xiv). Among the grandest natural features of the country, one or other of which should certainly be visited if in any wise practicable, are Niagara Falls (R. 45), the Canadian Pacific Railway from Banff to Vancouver (R. 55), and the Saguenay (R. 33). Less imperative than these, but also of great beauty and interest, are the St. Lawrence from Kingston to Montreal (R. 47), the 'Land of Evangeline' (R. 20), the Temagami Region (R. 49), the Muskoka District (R. 40), the Great Lakes (R. 46), the Kootenay Region (RR. 54, 56), Lake St. John (R. 32), the St. John River and Grand Falls (RR. 11, 13), and the Bras d'Or Lakes (R. 19). Among cities the romantic 'ancient capital' of Quebec (R. 30) is first in attraction and should be included in even the most flying visit to Canada; but Montreal (R. 28), Toronto (R. 39), Halifax (R. 18), and St. John (R. 10) are all interesting in their different ways. Ottawa (R. 35), as the capital of the Dominion, should by all means be included when practicable, and Winnipeg (R. 51), the youthful and prosperous capital of Manitoba, also deserves a visit. The grand trip to Alaska (R. 58), though taking us beyond Canadian territory, forms a natural sequel to the journey across the continent and may be begun at the charming city of Victoria (p. 289).

SEASON. The best months for travelling in Canada are, speaking generally, May, June, September, and October. For the mountain-region to the W. of Banff the month of August seems to be the driest and most favourable, although the smoke of forest-fires then often veils the view. The winter-months have, however, characteristic attractions of their own and for purposes of sport are often, of course, the best (p. liii). With proper equipment the traveller will find winter-travelling quite pleasant and easy, and, indeed, the only season that is really uncomfortable for the traveller is the thawing spell of early spring.

Where the territory included is so vast and the possible combinations of tours so endless, it may seem almost useless to attempt to draw up any specimen tours. The following, however, though not intrinsically better than hundreds of others, may serve to give the traveller some idea of the distances to be traversed and of the average expenses of locomotion. It is, perhaps, needless to say that the traveller will enjoy himself better if he content himself with a less rapid rate of progress than that here indicated. A daily outlay of \$8-10 will probably cover all the regular travelling-expenses on the under-noted tours; and this rate may be much diminished by longer halts.

a. A Week from Montreal.

(Railway and Steamer Expenses about \$ 20)

	Days
<i>Montreal</i> (R. 28)	11½
Mo treal to <i>Quebec</i> (RR. 29, 30)	2½
<i>Quebec</i> to <i>Lake St. John</i> (R. 32)	1
<i>Lake St. John</i> back to <i>Quebec</i> via the <i>Saguenay</i> (R. 33)	11½
<i>Quebec</i> back to <i>Montreal</i> (R. 29)	½
	<hr/> 7

IV. PLAN OF TOUR.

b. A Week in the Maritime Provinces.

(Fares \$ 16-18)

	Days
<i>Halifax</i> (R. 18)	1
<i>Halifax</i> viâ the <i>Bas d'Or Lakes</i> to <i>Sydney</i> and back (R. 19)	3
<i>Halifax</i> through the 'Evangeline Country' to <i>Annapolis</i> and <i>Digby</i> (R. 20)	1
<i>Digby</i> to <i>St. John</i> (R.R. 20, 10)	1 1/2
	<hr/> 6 1/2

[Or, instead of the Cape Breton trip, we may ascend the *River St. John* to *Fredericton* (R. 11; 1 day) and return to *St. John* viâ *St. Andrews* (p. 25 and R. 14; 2 days).]

c. A Fortnight from Toronto.

(Fares \$ 50-55)

<i>Toronto</i> (R. 39)	1
<i>Toronto</i> to <i>Niagara</i> by steamer (R.R. 43, 45)	2-3
<i>Niagara</i> to <i>Toronto</i> viâ <i>Hamilton</i> (R. 43)	1 1/2
<i>Toronto</i> to <i>Montreal</i> by the <i>St. Lawrence</i> (R.R. 47, 28)	2 1/2
<i>Montreal</i> to <i>Ottawa</i> (R.R. 34, 35)	1 1/2
<i>Ottawa</i> to <i>North Bay</i> (R. 48)	1 1/2
From <i>North Bay</i> to the <i>Temagami</i> and <i>Cobalt Districts</i> and back (R. 49)	2
<i>North Bay</i> to <i>Toronto</i> , with a side-trip into the <i>Muskoka District</i> (R. 40)	3
	<hr/> 14-15

d. Three Weeks from Montreal.

(Fares \$ 50)

<i>Montreal</i> to <i>Quebec</i> , <i>Lake St. John</i> , the <i>Saguenay</i> , and back as at p. xvii (R.R. 28, 29, 30, 32, 33)	7
<i>Montreal</i> to <i>Ottawa</i> , the <i>Temagami District</i> , the <i>Muskoka District</i> , and <i>Toronto</i> as above (R.R. 34, 35, 48, 49, 40, 39)	8
<i>Toronto</i> to <i>Niagara</i> and back as above (R.R. 43, 45)	3 1/2-4 1/2
<i>Toronto</i> to <i>Montreal</i> by the <i>St. Lawrence</i> as above (R. 47)	1 1/2
	<hr/> 20-21

e. Five or Six Weeks from Montreal.

(Fares \$ 220-280)

<i>Montreal</i> to <i>Quebec</i> , <i>Lake St. John</i> , the <i>Saguenay</i> , and back as at p. xvii (R.R. 28, 29, 30, 32, 33)	7
<i>Montreal</i> to <i>Ottawa</i> (R.R. 34, 35)	2
<i>Ottawa</i> to <i>Winnipeg</i> (R.R. 43, 50, 51)	3
<i>Winnipeg</i> to <i>Banff</i> (R. 52)	4
<i>Banff</i> to <i>Laggan</i> and <i>Field</i> (R. 55)	3
<i>Field</i> to <i>Glacier</i> (R. 55)	2
<i>Glacier</i> to <i>Vancouver</i> (R. 55)	1
<i>Vancouver</i> to <i>Victoria</i> and back (R. 57)	3
<i>Vancouver</i> back to <i>Port Arthur</i> viâ the <i>Kootenay Region</i> (R.R. 55, 56, 54, 53, 48)	5
<i>Port Arthur</i> to <i>Owen Sound</i> and <i>Toronto</i> viâ the <i>Great Lakes</i> (R. 46)	3
<i>Toronto</i> to <i>Niagara</i> and back as above (R.R. 43, 45)	3 1/2
<i>Toronto</i> to <i>Montreal</i> by the <i>St. Lawrence</i> (R. 47)	1 1/2
	<hr/> 38

[Many travellers will prefer to vary their routes across the continent by returning through the United States (see *Baedeker's United States*). In this case they are advised to omit the portion of the Canadian Pacific Railway between *Ottawa* and *Port Arthur* and to reach the latter point viâ *Toronto* and *Owen Sound* (R. 46)]

The Pedestrian is unquestionably the most independent of travellers, but there are few districts of Canada where walking-tours can be recommended. Indeed, the extremes of temperature and the scarcity of well-marked footpaths often offer considerable obstacles, while in the Far West a stranger on foot might be looked upon with suspicion or even be exposed to danger from the herds of semi-wild cattle. For a short tour a couple of flannel shirts, a pair of worsted stockings, slippers, the articles

of the toilet, a light waterproof, and a stout umbrella will generally be found a sufficient supply of impedimenta. Strong and well-tried boots are essential to comfort. Heavy and complicated knapsacks should be avoided, a light pouch or game-bag is far less irksome, and its position may be shifted at pleasure. A more extensive reserve of clothing should not exceed the limits of a small portmanteau, which may be forwarded from town to town by express.

V. Hotels and Restaurants.

Hotels. The quality of the Canadian hotels varies considerably in different localities. The best hotels of Montreal, Quebec, and Toronto, those under the management of the Canadian Pacific Railway (at Banff, Vancouver, etc.), and a few at fashionable watering-places (such as St. Andrews and Murray Bay) leave little opening for criticism. There are also fair hotels at Ottawa, Halifax, St. John, and some of the other large cities. The hotels in the smaller towns and in the country districts can seldom be classed as good, while sometimes (as in Nova Scotia) they are decidedly bad. A distinct process of improvement is, however, perceptible. The charges are considerably less than those of the hotels of the United States; the height of \$5 a day is reached only in a few instances, and \$3-3½ will probably be found the average rate on an ordinary tour. The comforts often afforded by the smaller and less pretentious inns of the old country can seldom be looked for from Canadian houses of the second or third class, and the traveller who wishes to economize will find boarding-houses (see p. xx) preferable. When ladies are of the party, it is advisable to frequent the best hotels only. The food is generally abundant, but the cuisine and quality vary greatly (comp. p. xx). The service is often excellent, and in this respect Canadian hotels are, perhaps, superior, class for class, to those of the United States.

The hotels of Canada are almost entirely managed on the *American Plan*, in which a fixed charge is made per day for board and lodging. No separate charge is made for service. The rate varies from about \$4 (in a few instances \$5) per day in the best houses down to \$1 per day in the smaller towns and country districts. Many of the hotels vary their rate according to the room, and where two prices are mentioned in the Handbook the traveller should indicate the rate he wishes to pay. Most of the objections to rooms on the upper floor are obviated by the excellent service of 'elevators' (lifts). Very large reductions are made by the week or for two persons occupying the same room, and very much higher prices may be paid for extra accommodation. Throughout the Handbook the insertion of a price behind the name of a hotel (\$4) means its rate on the American plan; where the hotel is on the European plan (exclusively or alternatively) the price of the room is indicated (R. from \$1). The above rates include all the ordinary requirements of hotel-life, and no 'extras' appear in the bill. The custom of giving fees to the servants is by no means so general as in Europe, though it is becoming more common in the larger cities. In hotels on the American system the meals are usually served at regular hours (a latitude of about 2 hrs. being allowed for each). The daily charge is considered as made up of four items (room, breakfast, dinner, and supper), and the visitor should see that his bill begins with the first meal he takes. Thus, at a \$4 a day house, if the traveller arrives before supper and leaves after breakfast the next day, his bill will be \$3; if he arrives after supper and leaves

at the same time, \$2; and so on. No allowance is made for absence from meals. Dinner is usually served in the middle of the day, except in large cities.

On reaching the hotel, the traveller enters the *Office*, a large and often comfortably fitted-up apartment, used as a general rendezvous and smoking-room, not only by the hotel-guests, but often also by local residents. On one side of it is the desk of the *Hotel Clerk*, who keeps the keys of the bedrooms, supplies unlimited letter-paper gratis, and is supposed to be more or less omniscient on all points on which the traveller is likely to require information. Here the visitor enters his name in the 'register' kept for the purpose, and has his room assigned to him by the clerk, who details a 'bell-boy' to show him the way to his room and carry up his hand-baggage. If he has not already disposed of his 'baggage-checks' in the way described at p. xvi, he should now give them to the clerk and ask to have his trunks fetched from the station and sent up to his room. If he has already parted with his checks, he identifies his baggage in the hall when it arrives and tells the head-porter what room he wishes it sent to. On entering the dining-room the visitor is shown to his seat by the head-waiter, instead of selecting the first vacant seat that suits his fancy. The table-waiter then hands the guest the menu of the day, from which (in hotels on the American plan) he orders what he chooses. The key of the bedroom should always be left at the office when the visitor goes out. Large hotels generally contain a barber's shop (shave 20-25 c.; elsewhere 10-15 c.), railway-ticket, express, and livery offices, book-stalls, a boot-black stand, etc. The charge for newspapers at the hotel book-stalls is often exorbitant (e.g. 5 c. for a 1 c. paper), but newsboys will generally be found just outside the hotel.

The following hints may be useful to hotel-keepers who wish to meet the tastes of European visitors. The wash-basins in the bedrooms should be much larger than is generally the case. Two or three large towels are preferable to half-a-dozen small ones. A canafe or jug of fresh drinking-water (not necessarily iced) and a tumbler should always be kept in each bedroom. If it were possible to give baths more easily and cheaply, it would be a great boon to English visitors. It is now, fortunately, more usual than of yore for the price of a bedroom to include access to a general bathroom; but those who wish a private bath attached to their bedroom must still pay \$1 (4s.) a day extra. No hotel can be considered first-class or receive an asterisk of commendation which refuses to supply food to travellers who are prevented from appearing at the regular meal-hours.

Boarding Houses. For a stay of more than a day or two the visitor will sometimes find it convenient and more economical to live at a *Boarding House*. These abound everywhere and can easily be found on enquiry. Their rates vary from about \$5 a week upwards. The keepers of such houses often receive transient guests, and they are generally preferable to inferior hotels. — *Furnished Apartments* are easily procured in the larger cities, from \$3-4 a week upwards.

Restaurants. In some of the large cities the traveller will find a few fair restaurants, but, as a rule, he will do well to take his meals at his hotel or boarding-house. Restaurants are attached to all hotels on the European plan (p. xix).

Soup, fish, poultry, game, and sweet dishes are often good; but beef and mutton are sometimes inferior to those of England. Oysters, served in a great variety of styles, are large, plentiful, and comparatively cheap. Wine or beer is much less frequently drunk at meals than in Europe, and the visitor is not expected to order liquor 'for the good of the house'. Iced water is the universal beverage, and a cup of tea or coffee is included in all meals at a fixed price. Wine is generally poor or dear, and often both. Liquors of all kinds are sold at *Saloons* (public houses) and *Hotel Bars*. Restaurants which solicit the patronage of

'gents' should be avoided. The meals on dining-cars and 'buffet cars' are usually preferable to those at railway-restaurants. Tipping the waiter is not, as a rule, necessary or even (outside of the large cities) expected, but may be found useful where several meals are taken at the same place. The custom, however, is by no means so firmly rooted as in Europe and should not be encouraged. Cafés, in the European sense, are hardly found in Canada, but the name is often used as the equivalent of restaurant.

VI. Post and Telegraph Offices.

Post Office. The postal service of Canada is carried on by the Dominion Government, and its regulations are essentially similar to those of Great Britain, though the practice of delivering letters at the houses of the addressees has not been extended to the smaller towns or rural districts. The service is, perhaps, not quite so prompt and accurate. The supply of letter-boxes is generally abundant, but the number of fully equipped post-offices is much lower (proportionately) than in England. Stamps are sold at all hotels.

The letter rate for places within the Dominion of Canada, Newfoundland, Mexico, or the United States is 2 c. per oz. Post-card 1 c.; reply post-card 2 c. A 'special delivery stamp' (10 c.), affixed to a letter in addition to the ordinary postage, entitles it to immediate delivery by special messenger in a dozen or so of the larger cities, where the free delivery system is in use. Books and other printed matter for Canada 1 c. per 2 oz. Merchandise for Canada and the United States 1 c. per oz., samples without value 1 c. per 2 oz. By the new Imperial Postage System letters to Great Britain and most other parts of the British Empire cost 2 c. per 1/2 oz. (1 oz. after Oct. 1st, 1907). Letters to other countries in the Postal Union cost 5 c. per 1/2 oz. (1 oz. after Oct. 1st, 1907), post-cards 2 c., books and newspapers 1 c. per 2 oz. Parcels to the United Kingdom 16 c. for the first lb. and 12 c. for each lb. additional. The registration-fee is 5 c. Undeliverable letters, originating in Canada, the United States, Mexico, or Newfoundland, will be returned free to the sender, if a request to that effect be written or printed on the envelope.

Domestic Money Orders (including United States) are issued by money-order post-offices, for any amount up to \$100, at the following rates for sums not exceeding \$5, 3 c.; \$5-10, 6 c.; \$10-30, 10 c.; \$30-50, 15 c.; \$50-75, 25 c.; \$75-100, 30 c. *Foreign Money Orders* (including Great Britain) cost 10 c. for each \$10, the limit being \$100.

In the year ending June 30th, 1905, the number of letters transmitted by the Post Office was 301,851,500, of post-cards 29,941,000, and of all other packages 60,463,338.

Telegraph Offices. The telegraph business of Canada to the W. of Quebec is mainly in the hands of the *Great Northern Telegraph Co.* and the *Canadian Pacific Railway Co.*, while the Maritime Provinces are served by the *Western Union Telegraph Co.* of New York. In 1904 the Dominion contained 37,481 M. of line and 180,137 M. of wire, while the number of despatches was 5,963,247. The rates within the Dominion vary from 25 c. to \$1 per 10 words, and to the United States from 40 c. per 10 words upwards. The rate to the United Kingdom is 25 c. per word. — In 1904 Canada contained 214,405 M. of *Telephone Wires*, with about 100,000 sets of instruments. About 300 million 'calls' are made annually. The *Bell Telephone Co.* extends over Ontario, Quebec, and Manitoba, while other companies serve the Maritime Provinces and British Columbia.

VII. Chief Dates in Canadian History. †

- 1492. *Columbus* discovers the islands of *America*
- 1497. *Cabot* discovers the mainland.
- 1517. *Cabot* visits *Hudson Bay* (?).
- 1534. *Jacques Cartier* enters the *Baie des Chaleurs* (p. 90).
- 1535. *Cartier* ascends the *St. Lawrence* (p. 128).
- 1541-43. First unsuccessful attempts at settlement (p. 147).
- 1598. Forty convicts left by the *Marquis de la Roche* as settlers on *Sable Island*; only twelve found alive after five years.
- 1603. First visit of *Samuel de Champlain* (p. 147)
- 1604-5. *Port Royal (Annapolis)* founded by the *Sieur De Monts* and *Baron de Poutrincourt* (p. 75).
- 1608. Renewed visit of *Champlain*. Foundation of *Quebec*, the first permanent settlement of Canada (p. 147).
- 1615. The first Christian missionaries, the *Récollet Fathers*, reach *Quebec*.
- 1625. *Jesuits* arrive at *Quebec*.
- 1629. *Quebec* taken by the English (p. 147).
- 1632. *Canada* and *Acadia* restored to France by the Treaty of *St. Germain-en-Laye*.
- 1642. *Ville Marie (Montreal)* founded by *Maisonneuve* (p. 129).
- 1654. *Acadia* taken by the English.
- 1659. *François Xavier de Laval*, the first Canadian bishop, arrives at *Quebec*.
- 1667. *Acadia* restored to France
- 1670. *Hudson Bay Co* founded (p. 247).
- 1672. *Frontenac* appointed Governor of *Canada* or *New France* (white population about 6700). Served till 1682.
- 1682. *De Labarre*, Governor
- 1685. *Marquis de Denonville*, Governor.
- 1689. *Frontenac* re-appointed Governor.
- 1690. *Sir Wm. Phipps*, with a squadron from *New England*, captures *Port Royal* but is repulsed at *Quebec*.
- 1698. Death of *Frontenac* (Nov. 28th).
- 1713. *Acadia (Nova Scotia)*, *Hudson Bay Territory*, and *Newfoundland* given to *England* by the Treaty of *Utrecht*.
- 1739. Population of *New France* 42,700.
- 1745. *Louisbourg* taken by the *New Englanders*.
- 1748. *Louisbourg* restored to the French in exchange for *Madras* by the Peace of *Aix-la-Chapelle*.
- 1749. *Halifax* founded (p. 51).
- 1755. Expulsion of the *Acadians* from *Nova Scotia* (p. 73).
- 1758. *Louisbourg* captured by the English for the second time.

† This list is largely based on that in the Statistical Year-Book of Canada, with additions by Mr. W. D. Le Sueur.

1759. *Fort Niagara* taken by *Gen. Prideaux* (July 26th). — *Wolfe* wins the *Battle of the Plains of Abraham* and captures *Quebec* (pp. 147, 154; Sept. 13-18th).
1760. Canada (pop. 70,000) surrendered to the British.
1763. Formal cession of 'Canada with all its dependencies' to Great Britain, by the Treaty of Paris (Feb. 10th).
1768. *Gen. Sir Guy Carleton* (afterwards *Lord Dorchester*) appointed Governor-General.
1770. *Prince Edward Island* made a separate province (p. 98).
1774. Passage of the '*Quebec Act*', giving the French Canadians the free exercise of the Roman Catholic religion and the protection of their own civil laws and customs and providing for the administration of the criminal law as used in England and for the appointment of a Legislative Council by the Crown.
1775. Outbreak of the *American Revolution* and invasion of Canada by the Americans; capture of *Montreal* (p. 129) and unsuccessful attack on *Quebec* (p. 147).
1776. American forces withdraw from Canada.
1783. *Second Treaty of Paris* and definition of the frontier between Canada and the United States. Foundation of *St. John* by the Loyalists (p. 29).
- The population of Canada at this time, including the Maritime Provinces, was about 165,000. It has been estimated that about 40,000 United Empire Loyalists — i.e. inhabitants of the United States who remained loyal to the British Crown — migrated into Canada within a few years after the second Treaty of Paris (comp. pp. 47, 192).
1784. *New Brunswick* made a separate province (p. 37).
1791. Passage of the '*Constitutional Act*', dividing *Upper* from *Lower Canada* and providing each with a popular representative body (Legislative Assembly) in addition to a nominated Legislative Council.
1792. First meeting of the parliaments of *Upper Canada* (at *Newark*; p. 203) and *Lower Canada* (at *Quebec*).
1793. Slavery abolished in *Upper Canada*.
1794. *Toronto (York)* is made capital of *Upper Canada*.
1806. Pop. of *Upper Canada* 70,718; of *Lower Canada* 250,000.
1812. War between Great Britain and the United States. *Detroit* captured by the Canadians (Aug. 16th). — *Battle of Queens-ton Heights* (Oct. 13th; p. 209).
1813. *York (Toronto)* captured and burned by the Americans (April 27th). — Battles of *Stony Creek* (June 5th; p. 211), *Moraviantown* (Oct. 5th), *Chateauguay* (Oct. 26th), and *Chrysler's Farm* (Nov. 11th).
1814. *Battle of Lundy's Lane* (July 25th; p. 220). — War ended by the *Treaty of Ghent* (Dec. 24th). — Pop. of *Upper Canada* 95,000, of *Lower Canada* 335,000.

1818. *London Convention*, regulating the rights of Americans in the British North American Fisheries.
1831. Phrase '*Family Compact*' comes into use to designate the oligarchic opposition to the popular demand for responsible government. — Pop. of Upper Canada 236,702; of Lower Canada 553,134.
1836. Opening of the first railway in Canada (p. 129).
- 1837-38. *Canadian Rebellion* (Wm. Lyon Mackenzie; Papineau; comp. pp. 184, 192, 221).
1838. *Lord Durham*, appointed Governor-General and High-Commissioner of Canada, prepares an important Report on the Canadian situation, recommending, *inter alia*, a Federal Union of all the Provinces and the introduction of responsible government. He returns to England (Nov. 1st), on account of disallowance of ordinance respecting rebel prisoners and fugitives.
1839. *Lord Sydenham*, Governor-General.
1841. *Union Act* (passed by British Parliament in 1840), making one province of Upper and Lower Canada, with equality of representation, goes into effect on Feb. 10th, with the understanding that Government is to be 'responsible' to the Provincial Legislature (comp. p. xxvi). — First joint Parliament meets at *Kingston* (June 13th). — Death of Lord Sydenham from an accident (Sept. 19th). — Pop. of Upper Canada 455,000, of Lower Canada 690,000.
1842. *Sir Charles Bagot*, Governor-General.
1843. Bagot (d. May 19th) succeeded by *Sir Charles Metcalfe*.
1844. *Montreal* made seat of Government.
1847. *Lord Elgin*, Governor-General.
1849. Riots in Montreal over the passage of the Rebellion Losses Bill; Parliament House burned. Seat of Government transferred in consequence to *Toronto*.
1851. Pop. of Upper Canada 952,004, of Lower Canada 890,261, of New Brunswick 193,800; of Nova Scotia 276,854.
1852. Seat of Government moved to *Quebec*. — Commencement of the *Grand Trunk Railway*.
1854. Lord Elgin succeeded by *Sir Edmund Head*. *Reciprocity Treaty* with the United States (to last ten years).
1858. *Ottawa* selected as the capital of Canada. — Decimal system of currency adopted.
1860. *Prince of Wales (Edward VII.)* visits Canada.
1861. *Viscount Monck* succeeds Sir E. Head. — Pop. of Upper Canada 1,396,091; of Lower Canada 1,111,566; of New Brunswick 252,147; of Nova Scotia 330,857; of Prince Edward Island 80,857.
- 1862-63. Troops sent out in mid-winter by the British Government in connection with the '*Trent*' affair.

1864. *Convention* at Charlottetown, on the union of the three Maritime Provinces, adjourned to Quebec, at the instance of the Canadian Government, to consider the larger question of the union of all the British North American Provinces (Oct 16-28th).
1865. Seat of Government transferred to *Ottawa* (comp. p. xxiv).
1866. Fenian invasion of Canada. Encounter at *Ridgeway* (Ont.).
1867. The *British North America Act* passed by the Imperial Parliament, effecting a union of the provinces of Canada, Nova Scotia, and New Brunswick under the name of the *Dominion of Canada*. The names of Upper and Lower Canada are changed to *Ontario* and *Quebec*. *Lord Monck* is first Governor-General of the Dominion, *Sir John A. Macdonald* (d. 1891), first Premier.
1868. *North-West Territories* purchased by the Dominion from the Hudson Bay Co. for 300,000*l*.
- 1869-70. *Lord Lisgar*, Governor-General. — *Red River Rebellion* quelled by *Col. Wolseley* (see p. 246).
1870. Province of *Manitoba* admitted to the Confederation.
1871. *Treaty of Washington* (May 8th). — *British Columbia* joins the Confederation (July 20th). — Pop of the Dominion 3,635,000.
1872. *Earl of Dufferin*, Governor-General.
1873. *Prince Edward Island* joins the Confederation (July 1st). — *Sir John Macdonald* resigns and is succeeded by *Mr. Alexander Mackenzie* (Liberal).
1876. *Intercolonial Railway* opened from Quebec to Halifax.
1878. *Marquis of Lorne*, Governor-General. — The Liberal Government defeated on the tariff, and the Conservatives, under *Sir John Macdonald*, return to power.
1879. Adoption of a protective tariff.
1881. Pop. of the Dominion 4,324,810.
1882. *Royal Society of Canada* established by *Marquis of Lorne*.
1883. *Marquis of Lansdowne*, Governor-General.
1885. *Second Riel Rebellion* (p. 253). — *Canadian Pacific Railway* across the continent completed.
1886. First through-train for the Pacific leaves Montreal on June 28th.
1888. *Lord Stanley of Preston* (afterwards *Earl Derby*), Governor-General. — Treaty for the settlement of the Fisheries Dispute signed at Washington (Feb. 15th), but rejected by the U. S. Senate (Aug.).
1891. Pop. of the Dominion 4,833,239. — Death of *Sir John Macdonald* (June 6th).
1893. *Earl of Aberdeen*, Governor-General. — Dispute about the *Bering Sea Seal Fisheries* settled by a Court of Arbitration meeting in Paris.

1896. Liberals return to power under *Mr. Wilfrid Laurier* (afterwards *Sir W. Laurier*). — Discovery of extensive deposits of gold in the Klondike District (p. 308).
 1898. *Earl of Minto*, Governor-General. — Canadian Government grants preferential tariff on British goods.
 1903. *Alaska Boundary Treaty* (see p. 296).
 1904. *Earl Grey*, Governor-General.
 1905. Provinces of *Saskatchewan* and *Alberta* created.

VIII. The Constitution of Canada.

By

the late *Sir J. G. Bourinot*, *K.C.M.G., D.C.L., LL.D.*
 Clerk of the House of Commons of Canada†.

The **British North America Act**, which received the assent of the Queen on the 29th of March, 1867, and came into force by royal proclamation on the 1st of July in the same year, gave a constitutional existence to the Dominion of Canada, which, at that time, comprised only the four provinces of *Ontario* and *Quebec* — previously known as *Upper* and *Lower Canada* — and *Nova Scotia* and *New Brunswick*. In the course of the succeeding six years, the provinces of *British Columbia* and *Prince Edward Island* were added to the Union, and a new province, under the name of *Manitoba*, was carved out of the North West Territory. This vast *North West Territory* was, after the purchase of the rights of the Hudson's Bay Company in Rupert's Land, formally transferred to the Dominion by an Imperial order in Council (June 23rd, 1870), and the three provinces of *Manitoba* (1870), *Alberta* (1905), and *Saskatchewan* (1905) have been created out of the territory so acquired. The remainder of the territory is divided into the provisional districts of *Keewatin*, *Yukon*, *Franklin*, *MacKenzie*, and *Ungava* (comp. p. 253).

Previous to the passage of the British North America Act, all the then existing provinces (with the exception of *Manitoba* — which, as just stated, was a subsequent creation — and the old colony of *British Columbia*, on the Pacific Coast) were in the possession of a complete system of parliamentary government, in all essential respects a transcript of the British system. Each province was governed by a Lieutenant-Governor, a Legislature of two Houses, and an Executive Council, whose members continued in office only as long as they possessed the support of the majority in the Legislative Assembly, or popularly elected branch of the legislature. They had for years possessed complete control of their local and provincial affairs, subject only to the sovereignty of the Imperial State. In all the provinces the criminal law and the judi-

† Events since this article was written for the original edition of the Handbook (1894) have necessitated a few verbal and other changes.

cial system of England prevailed. The common law of England was also the basis of the jurisprudence of all the provinces, except Quebec, where a million and a quarter of French Canadian people were and are still speaking the French language, professing the Roman Catholic religion, and adhering to the *Coutume de Paris* and the general principles of the civil law, as they obtained it from their ancestors, who first settled the province of Canada. Accordingly, when the terms of Union came to be arranged in 1864 by delegates from the several provinces of British North America, it was found necessary to establish a federation bearing many analogies to that of the United States, in order to meet the wishes of the people of these provinces, especially of French Canada, and to preserve all those local institutions, with which the people had long been familiar, and which they could not be induced, under any circumstances, to hand over to the sole control of one central Parliament. The resolutions of the Quebec conference were embodied in addresses of the several Legislatures of the provinces to the Imperial Parliament. These resulted in the passing of the British North America Act of 1867, now the fundamental law of the whole Dominion, setting forth the territorial divisions, defining the nature of the executive authority, regulating the division of powers, directing to what authorities these powers are to be confided, and providing generally for the administration and management of all those matters which fall within the respective jurisdictions of the Dominion and the Provinces. In accordance with this constitution, Canada has now control of the government of the vast territory stretching from the Atlantic to the Pacific to the N. of the United States, and is subject only to the sovereignty of the King and the Parliament of Great Britain in such matters as naturally fall under the jurisdiction of the supreme and absolute authority of the sovereign State.

If we come to recapitulate the various constitutional authorities which now govern the Dominion in its external and internal relations as a dependency of the Crown, we find that they may be divided for general purposes as follows:

The King.

The Parliament of Great Britain.

The Judicial Committee of the Privy Council.

The Government of the Dominion.

The Governments of the Provinces.

The Courts of Canada.

While Canada can legislate practically without limitation in all those matters which do not affect Imperial interests, yet sovereign power, in the legal sense of the phrase, rests with the government of Great Britain. Canada cannot of her own motion negotiate treaties with a foreign State, as that is a power only to be exercised by the sovereign authority of the Empire. In accordance, however, with the policy pursued for many years towards self-governing

dependencies — a policy now practically among the 'conventions' of the constitution — it is usual for the Imperial Government to give all the necessary authority to distinguished Canadian statesmen to represent the Dominion interests in any conference or negotiations affecting its commercial or territorial interests. The control over peace and war still necessarily remains under the direct and absolute direction of the King and his great Council. The appointment of the Governor-General rests absolutely with the King's Government. The same sovereign authority may 'disallow' any Act passed by the Parliament of Canada which may be repugnant to any Imperial legislation on the same subject applying directly to the Dominion, or which may touch the relations of Great Britain with foreign Powers, or otherwise seriously affect the interests of the Imperial State. The Judicial Committee of the King's Privy Council is the Court of last resort for Canada as for all other parts of the British empire, although that jurisdiction is only exercised within certain limitations consistent with the large measure of legal independence granted to the Dominion. Canada is now represented on this Imperial Court of Appeal. As it is from the Parliament of Great Britain that Canada has derived her constitution, so it is only through the agency of the same sovereign authority that any amendment can be made to that instrument.

The Preamble of the British North America Act, 1867, sets forth that the provinces are 'federally united', with a constitution 'similar in principle to that of the United Kingdom'. The model taken by Canadian statesmen was almost necessarily that of the United States, the most perfect example of federation that the world had yet seen, though they endeavoured to avoid its weaknesses in certain essential respects. At the same time, in addition to the general character of the provincial organizations and distribution of powers, and other important features of a federal system, there are the methods of government, which are copies, exact copies in some respects, of the Parliamentary Government of England. We see this in the clauses of the British North America Act referring to the executive authority, the establishment of a Privy Council, and the constitution of the two Houses of the Dominion Parliament. More than that, we have, in conjunction with the legal provisions of the British North America Act, a great body of unwritten law; that is to say, that mass of 'conventions', understandings, and usages which have been long in practical operation in England and govern the relations between the Crown and its advisers, the position of the Ministry and its dependence on the Legislature, and otherwise control and modify the conditions of a system of English Parliamentary government.

The various authorities under which the government of the Dominion is carried on may be defined as follows: —

1. The *King*, in whom is legally invested the executive authority; in whose name all commissions to office run; by whose author-

ity parliament is called together and dissolved, and in whose name bills are assented to and reserved. He is represented for all purposes of government by a *Governor-General*, appointed by His Majesty in Council and holding office during pleasure; responsible to the Imperial Government as an Imperial Officer; having the right of pardon for all offences, but exercising this and all executive powers under the advice and consent of a responsible ministry. The salary of the Governor-General (\$50,000) is paid by Canada.

2. A *Ministry* composed of about 13-16 members of a *Privy Council*; having seats in the two Houses of Parliament; holding office only whilst commanding a majority in the popular branch, acting as a council of advice to the Governor-General, responsible to parliament for all legislation and administration.

3. A *Senate* composed of eighty-seven members appointed by the Crown for life, though removable by the House itself for bankruptcy or crime; having co-ordinate powers of legislation with the House of Commons, except in the case of money or tax bills, which it can neither initiate nor amend, though it may reject them, having no power to try impeachments; having the same privileges, immunities, and powers as the English House of Commons when defined by law.

4. A *House of Commons* of two hundred and fourteen members elected for five years on the very liberal systems of franchise existent in the several provinces (in the majority of cases, registered manhood suffrage); liable to be prorogued and dissolved at any time by the Governor-General on the advice of the Cabinet; having alone the right to initiate money or tax bills, having the same privileges, immunities and powers as the English House of Commons when defined by law.

5. A *Dominion Judiciary* composed of a Supreme Court of a chief justice and five puisne judges, acting as a Court of Appeal for all the Provincial Courts; subject to have its decisions reviewed on Appeal by the Judicial Committee of the Queen's Privy Council in England, its judges being irremovable except for cause, on the address of the two Houses to the Governor-General. There is also an Exchequer Court (with one judge), with original exclusive jurisdiction in all suits against the Crown, and also authorized to act as a Colonial Court of Admiralty.

The several authorities of government in the Provinces may be briefly described as follows. —

1. A *Lieutenant-Governor* appointed by the Governor-General in Council, practically for five years; removable by the same authority for cause; exercising all the powers and responsibilities of the head of an executive, under a system of parliamentary government, having no right to reprieve or pardon criminals.

2. An *Executive Council* in each province, composed of certain heads of departments, varying from five to twelve in number, called

to office by the Lieutenant-Governor, having seats in either branch of the local legislature; holding their positions as long as they retain the confidence of the majority of the people's representatives; responsible for and directing legislation; conducting generally the administration of public affairs in accordance with the law and the conventions of the constitution.

3. A *Legislature* composed of two Houses — a Legislative Council and an Assembly — in two provinces (Quebec and Nova Scotia), and of only an Assembly or elected House in the other provinces. The Legislative Councillors are appointed for life, by the Lieutenant-Governor in Council, and are removable for the same reasons as Senators; cannot initiate money or tax bills, but otherwise have all powers of legislation; cannot sit as Courts of Impeachment. The Legislative Assemblies are elected for four years in all cases, except in Quebec, where the term is five; liable to be dissolved at any time by the Lieutenant-Governor, acting under the advice of his Council; elected on manhood suffrage in Ontario, Manitoba, British Columbia, New Brunswick, and Prince Edward Island, and on a very liberal franchise in the other sections.

4. A *Judiciary* in each of the provinces, appointed by the Governor-General in Council; removable only on the address of the two Houses of the Dominion Parliament.

As regards the remaining territories (see p. xxvi), it is provided by the British North America Act that the Dominion is to exercise complete legislative control. The administration is entrusted to a Commissioner, appointed by the Governor in Council; and the latter is also empowered to appoint an advisory Council of not more than four members. The Commissioner in Council may also be entrusted by the Governor in Council with certain limited legislative powers. The present Commissioner is the Comptroller of the North-West Mounted Police (p. 253). In consequence of the influx of a large population of gold-seekers, the territory of Yukon has been placed under special provisions of government. A Commissioner, a Council (partly elective), and judges are appointed by the Dominion Government, under authority given by the Canadian Parliament.

Coming now to the distribution of powers between the Dominion and Provincial authorities, we find that they are enumerated in sections 91, 92, 93, and 95 of the fundamental law. The 91st section gives exclusive jurisdiction to the Parliament of the Dominion over all matters of a general or Dominion character, and section 92 sets forth the exclusive powers of the provincial organizations. The classes of subjects to which the exclusive authority of the Dominion Parliament extends are enumerated as follows in the Act: —

The public debt and property. The regulation of trade and commerce. The raising of money by any mode or system of taxation. The borrowing of money on public credit. Postal service.

Census and statistics. Militia, military, and naval service and defence. The fixing of and providing for the salaries and allowances of civil and other officers of the Government of Canada. Beacons, buoys, lighthouses, and Sable Island. Navigation and shipping. Quarantine and the establishment and maintenance of marine hospitals. Sea-coast and inland fisheries. Ferries between a province and a British or foreign country, or between two provinces. Currency and coinage. Banking, incorporation of banks, and the issue of paper-money Savings-banks. Weights and measures. Bills of exchange and promissory notes. Interest. Legal tender. Bankruptcy and insolvency. Patents of invention and discovery; copyrights. Indians and lands reserved for the Indians. Naturalisation and aliens. Marriage and divorce. The criminal law, except the constitution of the Courts of Criminal jurisdiction, but including the procedure in criminal matters. The establishment, maintenance, and management of penitentiaries; and lastly, 'such classes of subjects as are expressly excepted in the enumeration of the subjects assigned by the Act exclusively to the Legislature of the provinces'.

On the other hand, the exclusive powers of the provincial legislatures extend to the following classes of subjects: —

The amendment from time to time, notwithstanding anything in the Act, of the constitution of the province, except as regards the office of Lieutenant-Governor Direct taxation within the province to raise revenue for provincial purposes. The borrowing of money on the sole credit of the province. The establishment and tenure of provincial offices and appointment and payment of provincial officers. The management and sale of the public lands belonging to the province, and of the timber and wood thereon (except in Alberta and Saskatchewan). The establishment, maintenance, and management of public and reformatory prisons in and for the province. The establishment, maintenance, and management of hospitals, asylums, charities, and eleemosynary institutions in and for the provinces other than marine hospitals. Municipal institutions in the province. Shop, saloon, tavern, and auctioneer and other licenses, in order to the raising of a revenue for provincial, local, or municipal purposes. Local works and undertakings other than such as are of the following classes: — (a) Lines of steam or other ships, railways, canals, telegraphs, and other works and undertakings connecting the province with any other of the provinces, or extending beyond the limits of the province; (b) Lines of steamships between the province and any British or foreign country; (c) Such works as, though wholly situate within the province, are before or after their execution declared by the Parliament of Canada to be for the general advantage of Canada or for the advantage of two or more of the provinces. The incorporation of companies with provincial objects. Solemnisation of marriage in

the province. Property and civil rights in the province. The administration of justice in the province, including the constitution, maintenance, and organization of provincial courts, both of civil and criminal jurisdiction, and including procedure in civil matters in those courts. The imposition of punishment by fine, penalty, or imprisonment, for enforcing any law of the province made in relation to any matter coming within any of the classes of subjects above enumerated. Generally all matters of a merely local or private nature in the province.

Then, in addition to the classes of subjects enumerated in the sections just cited, it is provided by section 93 that the Legislatures of the provinces may exclusively legislate on the subject of education, subject only to the power of the Dominion Parliament to make remedial laws in case of the infringement of any legal rights enjoyed by any minority in any province at the time of the Union (or since acquired by Provincial legislation) — a provision intended to protect the separate schools of the Roman Catholics and the Protestants in the provinces. The Dominion and the provinces may also concurrently make laws in relation to immigration and agriculture, provided that the Act of the province is not repugnant to any Act of the Dominion Parliament; and under section 94 the Dominion Parliament may provide for the uniformity of laws relative to property and civil rights in Ontario, Nova Scotia, and New Brunswick. [There have of late arisen in the Dominion Parliament and in the public press wide differences of opinion as to the proper interpretation and application of the educational clauses of the British North America Act.]

The statesmen who assembled at Quebec believed it was a defect in the American constitution to have made the national government alone one of enumerated powers and to have left to the States all powers not expressly taken from them. For these reasons mainly the powers of both the Dominion and the Provincial Governments are stated, as far as practicable, in express terms, with the view of preventing a conflict between them; the powers that are not within the defined jurisdiction of the Provincial Governments are reserved in general terms to the central authority. In other words, 'the residuum of power is given to the central instead of to the provincial authorities'. In the B.N.A. Act we find set forth in express words:

1. The powers vested in the Dominion Government alone.
2. The powers vested in the Provinces alone.
3. The powers exercised by the Dominion Government and the Provinces concurrently
4. Powers given to the Dominion Government in general terms.

The conclusion we come to after studying the operation of the Constitutional Act, until the present time, is that while its framers endeavoured to set forth more definitely the respective powers of the central and local authorities than is the case with the Constitu-

tion of the United States, it is not likely to be any more successful in preventing controversies constantly arising on points of legislative jurisdiction. The effort was made in the case of the Canadian constitution to define more fully the limits of the authority of the Dominion and its political parts; but while great care was evidently taken to prevent the dangerous assertion of provincial rights, it is clear that it has the imperfections of all statutes, when it is attempted to meet all emergencies. Happily, however, by means of the Courts in Canada, and the tribunal of last resort in England, and the calm deliberation which the parliament is now learning to give to all questions of dubious jurisdiction, the principles on which the federal system should be worked are, year by year, better understood, and the dangers of conflict lessened.

The perpetuation of the Canadian constitution and the harmony of the members of the Confederation rest in a large measure on the Judiciary of Canada, just as the constitution of the United States owes much of its strength to the legal acumen and sagacity of a great constitutional lawyer like Chief Justice Marshall, and of the able men who have, as a rule, composed the Federal Judiciary. The instinct of self-preservation and the necessity of national union must in critical times prevail over purely sectional considerations, even under a federal system, as the experience of the United States has conclusively shown us; but, as a general principle, the success of confederation must rest on a spirit of compromise, and in the readiness of the people to accept the decisions of the Courts as final and conclusive on every constitutional issue of importance.

IX. Geographical and Geological Sketch,

with notes on Minerals, Climate, Immigration, and Native Races,
by the late *George M. Dawson, C.M.G., LL.D., F.R.S.*,
Director of the Geological Survey of Canada.†

The name of Canada was first applied by Jacques Cartier, the discoverer of the St. Lawrence, to a limited tract of country in the vicinity of the Indian village of Stadacona, now the city of Quebec. It is a name of native origin and of disputed meaning, but is generally believed to have merely denoted a collection of houses — a village. At a later date, it was employed to designate all the early settlements of France along the valley of the lower St. Lawrence, and still later it became that of a great tract of country including what now forms the provinces of Quebec and Ontario, previously known as Lower and Upper Canada respectively. When to Canada, thus constituted, the Maritime Provinces were politically united in 1867, the name became a general one, and it was subsequently still

† Some alterations have been made in this sketch by *Dr. H. M. Anu* and *Mr. James White*, in order to bring it up to date.

further extended, with the growth of the Dominion, so as to embrace the whole of the North-West Territories and British Columbia. Thus, at the present time, the **Dominion of Canada** includes all parts of British North America excepting the island of Newfoundland, with its dependency of Labrador, which still remains a separate colony.

The above is a matter of nomenclature, but in following the history of the occupation and growth of the country, it will be found that the extension of the old name, first applied to the vicinity of Quebec, was governed by the ruling physical features of the N. part of the American continent. Thus the existence of the River St. Lawrence, with that of its great estuary and the gulf, naturally resulted in the individuality of the Dominion of Canada, by affording a highway of exploration and trade which extended into the very heart of the continent and along which explorers and traders had already penetrated very far, before the knowledge of the settlers of New England had extended much beyond the Appalachian Mountain ranges.

Geographically, Canada and the Island of Newfoundland may be considered together, the area of the whole of British North America being, according to the latest computations, about 3,730,000 sq. M. This is somewhat greater than that of the United States with Alaska, and slightly less than that of Europe.

Though more complicated than the United States in its geography and particularly in the outlines of its coast, Canada is simpler in this respect than Europe. The same or very similar types of geological structure, with their accompanying and dependent features of surface form, are very widely extended. Great distances may be traversed without any notable change of conditions, and no examination of a single province suffices to give an idea of the whole.

For the purposes of the present very brief and general description, Canada may be treated of under three main divisions or regions, naturally contrasted not only in their present appearance but in respect also to their geological history. These are (1) an *Eastern Region*, (2) a *Central Region*, and (3) a *Western Region*.

The **Eastern Region** may be defined as extending from the Atlantic coast to Lake Superior, and is farther bounded to the W. by a chain of great lakes which extends from the vicinity of the W. end of Lake Superior to the Arctic Ocean near the mouth of the Mackenzie River. This is characterized by a diversified surface, which is scarcely ever really mountainous, and was originally a great forest land, save in the extreme N., where the rigour of the climate prevents arboreal growth. — The **Central Division** lies between the W. boundary of the last and the E. base of the Rocky Mountain region. It is a great interior continental plain, which runs northward, with narrowing dimensions, to beyond the Arctic circle.

Its S. part consists of open prairies, its N. of woodland. — The **Western Division** is the Cordilleran belt, the wide mountainous border of the continent on the Pacific side, with very varied and very bold topography.

These divisions, based alone on physiographical conditions, are very unequal in size, the eastern being much the largest and constituting in fact more than one-half of the whole area. It includes, in its S. parts, all the older and thickly settled provinces of the Dominion, and requires, therefore, to be further subdivided and spoken of in somewhat greater detail.

The Eastern Region of Canada, as above defined, is composed almost entirely of very ancient rocks belonging to the Archæan and Palæozoic divisions of geologists. Throughout the later geological ages, these rocks, fully consolidated and set, have remained exempt from important disturbance or folding; but have been subjected to very prolonged processes of waste and wear, so that the surface features and relief of the whole region, as now seen, are the resultant of such denudation. The harder and more resistant rocks form the higher points. Beginning in the Labrador peninsula, running round to the S. of Hudson Bay and thence N.W. to the Arctic Ocean, is a broad belt of crystalline rocks of great antiquity, which may be regarded as constituting the nucleus (or protaxis) of the N. American continent, and forming the ruling feature of all this E. division of Canada. Its surface, as it exists at present, forms a vast irregular and hummocky plateau which seldom exceeds 1500 ft. in elevation. Except in the valleys of its S. parts and in the great alluvial deposits of the James Bay Basin, it offers little attraction to the agriculturalist, as the greater part of its extent is but scantily and irregularly furnished with an indifferent sandy soil. It is pre-eminently characterized by its immense number of lakes, large and small, and by its irregular and winding rivers with numerous rapids and falls. By those waterways it may be traversed in light canoes in almost any direction. From the upper Ottawa, Gatineau, Lièvre, and St. Maurice Rivers, rising within its area, a great part of the important timber product of Canada is brought.

The Appalachian Mountain system, which gives form to the E. coast of the United States, is continued with reduced height through the Maritime or Acadian provinces of Canada and an adjacent portion of the province of Quebec to the S. of the St. Lawrence. The highest ridges of this system in Canada are the Shickshock Mountains, which border the lower estuary of the St. Lawrence and terminate in the promontory of Gaspé. Ridges of hard and often crystalline rocks belonging to the same system of elevation traverse New Brunswick; while Nova Scotia may be regarded as a parallel elevation of identical character.

Nova Scotia is connected with the mainland by a neck of low land. A part of its shores upon the Bay of Fundy, together with

Prince Edward Island, in the Gulf of St. Lawrence, are composed of rocks newer than those generally characteristic of the E. division of Canada. These are referable to the Permian and Triassic ages of geologists, and in the Annapolis valley as well as in Prince Edward Island support some of the most fertile farming-regions of the Acadian provinces. The surface of the Acadian provinces, though varied and uneven, is nowhere high. The most elevated ridges in Nova Scotia seldom exceed 1000 feet, while Prince Edward Island is everywhere low. The most striking feature of the Acadian provinces is their irregular and deeply indented coast-line — particularly marked in Nova Scotia — resulting in the importance of the fishing and maritime industries generally in these provinces.

Newfoundland, in its geological structure and topography, is entitled to be classed as a terminal portion of the Appalachian system or range, but by reason of its N. situation is less fertile than the Acadian provinces of Canada, while its fisheries are relatively more important.

The great valley of the St. Lawrence lies between the ridge-like elevations of the Appalachian system on one side and the base of the above described Laurentian plateau on the other. The provinces of Quebec and Ontario bordering upon it are thus especially attached to the hydrographic basin of the St. Lawrence, though a small portion of this basin is included within the limits of the United States.

Above the city of Quebec, the base of the Laurentian highlands and the ridges of the Appalachian system diverge, and the river flows through an extensive low country — the St. Lawrence plain — of which the greater width lies on the S.E. side of the river. This plain extends to Kingston (p. 227), near the outlet of Lake Ontario, and to Ottawa (p. 176), on the river of the same name, and in all comprises an area considerably exceeding 10,000 sq. M. It is based on horizontal beds of Ordovician rocks, generally limestones, and is a region of notable fertility, which for many years after the first settlement of Canada constituted its great granary. At Montreal, and here and there in the plain to the S. and E., conspicuous and rather abrupt elevations of small extent (the so-called 'Monte-regian Hills') occur, which represent the basal remnants of volcanic vents of great antiquity breaking through the flat-lying rocks.

Near the outlet of Lake Ontario, a narrow neck of the Laurentian country, constituting the 'Frontenac Axis', crosses the St. Lawrence, forming there the picturesque Thousand Islands (p. 228). Beyond this point, and to the S. of a line drawn from it to the N. part of Georgian Bay on Lake Huron, lies the most fertile and densely populated portion of the province of Ontario, forming a great peninsula and bounded to the S. and W. by lakes Ontario, Erie, and Huron, with their connecting waters. This may again be described in general terms as an extensive plain, for its elevations, though

higher than any of those met with in the lower St. Lawrence plain proper, never exceed 1800 ft. above the sea-level and are nowhere abrupt. Its area is approximately 26,000 sq. M. Its soil is almost everywhere fertile, and in its S. part the climate admits of the successful culture on a large scale of grapes, peaches, maize, and other crops requiring a long summer season with considerable warmth. Like the St. Lawrence plain it is based on flat or gently inclined rocks of the Palæozoic age, including strata from the Ordovician to the Devonian period, besides glacial and other 'drift' of the Pleistocene age.

The Great Lakes, forming the perennial reservoirs of the St. Lawrence, and constituting one of the most remarkable geographical features of North America, have an aggregate area somewhat exceeding that of Great Britain, or 94,750 sq. M. They stand at four distinct levels above the sea, as follows. — Ontario 246 ft., Erie 572 ft., Huron and Michigan 581 ft., Superior 602 ft. Of the difference in height between lakes Erie and Ontario, 167 ft. is accounted for by the Falls of Niagara. The mode of formation of these vast fresh-water basins has been the subject of much discussion and difference of opinion, but in all probability they have been gradually excavated by the denuding action of an ancient system of rivers, which, at a time when the continent stood higher than it now does, have formed extensive valleys by the gradual removal of the surface of their drainage-basins. Subsequent changes of level, together with the irregular deposition of superficial materials during the Glacial Period, which have not acted uniformly on different parts of the surface, have resulted in the flooding of these old basins. That extensive changes of level have occurred, is evidenced by the fact that the beds of some of the lakes are now considerably below the present sea-level. The honeycombed rocks constantly brought up by fishing nets from the bottom of (*e.g.*) Lake Huron also go to prove that the dissolving or gradual decomposition of the rock-materials has been a powerful factor in forming lake-basins.

Beginning with the ancient nucleus of the Laurentian plateau, it will be observed that newer formations of Palæozoic age accumulated about its margins. At a later date these were ridged up and folded on the line of the Appalachians, while parts of them, now forming the plain of the St. Lawrence valley, remained comparatively undisturbed. Long after these events, and when the whole E. division of Canada already constituted a stable dry land, a great inland sea extended through the centre of the continent from the Gulf of Mexico to the Arctic Ocean. It is unnecessary to endeavour to follow the whole history of this sea, of which the earlier stages are yet imperfectly known; but in the Cretaceous period, at approximately the time when the chalk-formations of Europe were being laid down, great horizontal beds of sediment were being deposited in this central region. At the close of this period, the deposits

others they separate in such a manner as to admit considerable areas of plateau land or low country. Of such areas the Interior Plateau of British Columbia is the most important and best known. This has a width of about 100 M., with a length (from the vicinity of the 49th parallel to about $55^{\circ}30'$) of nearly 500 M. Its mean elevation is about 3500 ft., but it is by no means uniform in this respect, and can indeed only be described as a plateau by contrast with the more elevated mountain tracts which bound it. Omitting from consideration other minor areas of plateau or low country, we find, far to the N., another extensive and relatively low country about the headwaters of the Yukon, in which isolated ranges of mountains of moderate height appear irregularly.

The Pacific coast of the Cordilleran region, included in British Columbia and in part of Alaska, is remarkably intricate, recalling in its outlines the well-known coast of Norway. It is dissected by long and very deep and sinuous fjords which penetrate far into the Coast Ranges, while innumerable islands lie off it. Resulting from the last-mentioned circumstance is the fact that an almost continuously sheltered line of navigation exists from the S. end of Vancouver Island to Cross Sound in Alaska, a distance of over 800 M. This route, along the shores of British Columbia and Alaska, is that generally followed by the coasting steamers (see R. 58), and it abounds in fine scenery, though the most striking landscapes — those existing far up the several fjords — are seldom seen by the ordinary traveller or tourist. Beyond the main line of the coast and its immediate fringe of islands, Vancouver Island and the Queen Charlotte Islands may be regarded as constituting the unsubmerged and outstanding portions of an outer mountain range.

The drainage system of the Cordilleran belt is remarkably complicated. Near the S. boundary of Canada, a narrow portion of its E. part is tributary to branches of the Saskatchewan River. Farther to the N., the width of that portion which drains to the E. increases, till the Peace, Liard, and Peel Rivers are found to draw much of their waters from country lying to the W. of the Rocky Mountains proper and to cut completely through this range. Beyond the 60th degree of latitude, the Cordilleran region declines gradually to the N.W. and is drained in that direction by branches of the Yukon, which eventually unite, and the resulting river, turning to the W., traverses the whole breadth of Alaska and discharges into Bering Sea. The Fraser River, with a total length of about 600 M., is the most important of those of the S. part of the Canadian mountain region.

All these streams follow very sinuous and indirect courses, and they are generally swift, broken by numerous falls and rapids, and in consequence unsuited for continuous navigation.

The line of the Canadian Pacific Railway is practically the only one by which the Cordilleran region of Canada is crossed by the ordinary traveller, and the S. part of the province of British Columbia

which is thus traversed, is its best known part. It may thus assist in forming a conception of the features of this region, which is so interesting from many points of view, briefly to note in their order the main features there found —

The Rocky Mountains proper have in this part of their length a width of about 60 M. They are chiefly composed of Palæozoic rocks, among which limestones largely preponderate, and they justify the name by the abundance of bare, bold peaks, many of which exceed 10,000 ft. in height. But as the valleys and passes by which the range is traversed stand at levels of from 4000 to over 5000 ft., the actual height of these mountains does not appeal to the eye so forcibly as that of some lower ranges which rise from the level of the sea.

After descending to the great valley through which the upper waters of the Columbia and its tributary the Kootenay flow in opposite directions, the Selkirk Range is crossed. The valleys are here narrower, and the mountains, rising close at hand, are remarkably picturesque and truly Alpine in character. The highest known summits in this range somewhat exceed 10,000 ft. A descent is then again made to the Columbia in a lower part of its course, after which the Gold Range, a less elevated and less picturesque mountain system, is crossed. This and the Selkirk range are notable examples of the discontinuous mountain systems already alluded to which lie between the main bordering ranges of the Cordillera.

From the W. flanks of the Gold Range, after passing the Shuswap Lakes — which may be taken as typical of many important lakes of the Cordillera — the Interior Plateau of British Columbia is traversed. The wide valleys which here characterize this plateau are often very fertile, though irrigation (depending on the streams which are copiously supplied by the drainage of the higher levels) is generally necessary to ensure successful agriculture. The barrier formed by the Coast Ranges, which interrupt the W. moisture-bearing winds, accounts for the comparative aridity of much of this region, as well as for its wide tracts of treeless country spread along the slopes of the valleys and over some of the higher parts of the plateau where cattle and horses find abundant and nutritious pasture.

Leaving the plateau country, the line of railway next traverses the Coast Ranges by following the Fraser River, which in a series of cañons and gorges has cut its way to the Pacific. Many summits in this bordering system of mountains attain 7000 or 8000 ft. above the sea, while some reach a height of 9000 ft.

Mineral Wealth. Closely connected with the geological structure of the country is the occurrence of mineral substances of economic value, and next to its physical features (also dependent on its geological constitution), the distribution of such minerals is one of the ruling factors in regard to the determinations of centres of popula-

tion. It is here only possible to mention a few of the more important facts in connection with the mineral resources of Canada[†].

Coal, of the age of the Coal Measures or Carboniferous system of Europe, is found and extensively mined in Nova Scotia, particularly in the vicinity of Springhill, near Pictou, and in Cape Breton. The output in 1905 amounted to 5,646,583 tons. In New Brunswick and in Newfoundland, coal of the same character, but so far as known in much less quantity, is again found.

In the Provinces of Quebec and Ontario coal is wanting, but in the Ontario Peninsula *Petroleum* is obtained from bored wells in considerable quantity, and *Natural Gas* has lately been found in abundance in certain places. These combustible materials are derived from rocks of Devonian, Silurian, and Ordovician age, older than the Carboniferous system.

Beds of *Lignite* or *Brown Coal*, resembling that of Germany and Bohemia, underlie vast tracts of the great interior plain of Canada, where, because of their undisturbed condition, they are often very easily worked. On approaching the base of the Rocky Mountains, these fuels, in consequence of greater alteration, gradually change into true bituminous coals, which are abundant in the foot-hill region; while in certain isolated basins in the Rocky Mountains they have been still further changed into true anthracite. All these fuels may be classed as of Cretaceous age.

In British Columbia, excellent bituminous coals of the same age are worked on Vancouver Island (output in 1905, 1,945,452 tons). Fuels of the same kind occur in the Queen Charlotte Islands, where anthracite is also found, but these have not as yet been utilized. In the inland portions of this province, both bituminous coals and lignites (the latter of Tertiary age) are represented. The Crow's Nest Pass Branch of the Canadian Pacific Railway (p. 266) traverses one of these inland coal basins, which supplies the smelters of Kootenay (B.C.), Montana, and Idaho with excellent coke. — The N.W. Territories, Yukon, Alberta, and Saskatchewan yielded 736,617 tons of coal in 1904. Petroleum and natural gas fields also occur in Alberta.

It will be observed that both coasts of Canada are well supplied with coal, where it offers itself readily to commercial purposes and facilitates communication by sea. The whole coal- and lignite-bearing area of Canada which has already been approximately defined has been estimated at about 97,000 sq. M.

Iron Ores are found in abundance and of many different kinds. They are worked to a limited extent in Newfoundland, Nova Scotia, Quebec, Ontario, and British Columbia. Ores of *Copper* and *Lead* are also widely distributed. *Gold*, in the form of auriferous quartz veins, is worked to a considerable extent in Nova Scotia, and al-

[†] For details, see reports of the *Geological Survey of Canada*, Ottawa.

luvial deposits occur in Quebec. In the W part of Ontario, particularly in the vicinity of the Lake of the Woods and Rainy Lake, several mines are already in operation and many others are in course of development. In British Columbia alluvial or 'placer' mining has long been carried on, and of late years both free milling and smelting ores containing gold have assumed a great and increasing importance. Several of the rivers to the E. of the Rocky Mountains, in Alberta and Saskatchewan, yield stream gold, in remunerative quantities. The most striking recent development, however, is that of the Klondike region, which since 1897 has attracted so much attention to Yukon Territory. The alluvial deposits here have proved exceptionally rich, and the existence of valuable gold-bearing lodes is confidently anticipated. *Silver*, in greater or less quantity, is usually associated with the ores of lead. Mines in the vicinity of Thunder Bay, on Lake Superior, have produced a considerable amount of silver, and the recently opened silver mines of the Kootenay district of British Columbia are important. The still more recent discoveries in the Cobalt district, Ontario (p 238), where large masses of native silver are associated with cobalt, nickel, and arsenic, are attracting attention. Other discoveries in the country to the N, and the opening (at an early date) of this area by the construction of the Grand Trunk Pacific Railway, indicate this as one of the most promising mining regions of Canada.

Without endeavouring to enumerate the many mineral products of minor importance, the following, which have already attracted considerable attention commercially, and which in some instances occur in Canada under peculiar conditions, may be specially alluded to: — *Nickel*. Large deposits of nickeliferous pyrrhotite are worked in the Sudbury district, to the N. of Lake Huron. — *Asbestos*. Extensively worked in the townships of Thetford, Coleraine, and Danville, Quebec. — *Mica*. Worked particularly in the County of Ottawa and its vicinity, to the N. of the river of the same name, in the Province of Quebec. — *Apatite (Phosphate)* occurs in the Ottawa Valley, but the cost of extraction renders it at present unprofitable to work. — *Plumbago* or *Graphite*. Widely distributed, but the most important known deposits are those found in the region last referred to and in the same rocks of the Laurentian system. — *Corundum*, the *Emery* of commerce, and ranking next to the diamond in the scale of hardness, occurs in considerable quantity in E. Ontario. — *Salt*. Obtained from bored wells, in the form of brine, in the W. part of the Ontario peninsula. — *Gypsum*. Occurring in great abundance in Nova Scotia and New Brunswick, and also in parts of the Ontario peninsula. It is worked in all three provinces. — *Platinum*. Found in alluvial deposits in association with gold in certain districts in British Columbia. The quantity so far obtained amounts to only a few thousand ounces annually, but it is greater than that produced elsewhere on the continent.

Structural materials, including *Building Stones* of all kinds, *Slate*, *Clay* suitable for brick-making, etc., are abundant, and their production annually represents an important part of the total mineral product of the country. It is not possible here even to designate the many varieties met with, the purposes to which they are applied, or the particular localities from which they come. Marbles, serpentines, granites, and other crystalline rocks afford many ornamental stones suitable for architectural uses.

The total value of the mineral products of Canada in 1905 amounted to \$ 68,574,700 (13,714,940*l.*).

Climate. The climate of Canada as a whole is of the 'Continental' type, with strongly contrasted temperatures between the summer and winter months, the only notable exception to this being found in a comparatively narrow strip along the Pacific coast, to the W. of the Coast Ranges of British Columbia. That part of Canada which has already been referred to for convenience as the E. division or region, is everywhere characterized by hot summers, with cold winters, during which snow lies upon the ground continuously for several months and most of the rivers and lakes are ice-bound. St. John's (Newfoundland), Halifax (Nova Scotia), and St. John (New Brunswick) are the principal ports on the Atlantic side which remain open to commerce throughout the year. The rainfall of all this region is seasonable and ample from the point of view of agriculture. The moisture-bearing winds come chiefly from the S.E., while both in summer and winter, dry winds from the N.W. are characteristic.

The central region, being farthest from the influence of any sea, presents the greatest range of temperature as between the summer and winter months, the difference between the means of these seasons often amounting to about 70° Fahr. As already stated, the rainfall is here comparatively light, particularly in the S. portion of the great plain. To this central region, the greater part of the Cordilleran belt may, in respect to climate, be attached; for though not far distant from the Pacific, the humid winds arriving from that ocean are effectively barred out or deprived of their moisture by the continuous elevations of the Coast Range. In the Cordilleran country, however, the bold topographical features cause the climate to vary much as between places not far removed and the conditions do not thus possess the uniformity of those of the great plains, and in the lower valleys the summer is longer and much less severe than is the case on the plains.

The territory which borders on the Pacific has, as already indicated, an oceanic climate with small range in temperature and very copious precipitation, particularly in the autumn and winter months. At Victoria, situated on the S. end of Vancouver Island, the climate much resembles that of the S. of England. Snow seldom lies upon the ground for more than a few days in winter, while in some sea -

sons hardy plants continue to bloom throughout the winter, and the thermometer has scarcely ever been known to touch zero of Fahrenheit.

What has been said above of the climate of Canada refers to the S. and inhabited part of the great area of the Dominion. Far to the N., Arctic conditions prevail — a rigorous winter of extreme length with a short but warm summer.

A noteworthy difference exists between the E. and W. parts of Canada in corresponding latitudes. Places on the E. or Atlantic coast have much lower mean temperatures than those found in the same degree of latitude in Europe; while on the Pacific coast, the conditions are more nearly like those of Europe and again very different from those of the Atlantic coast. The causes of these differences are rather complicated. They depend in part on the direction of the prevailing winds, in part on the circumstance that while the E. coast of North America is chilled by a cold Arctic current, the temperature of the W. sea is maintained above the normal by a warm current, flowing past Japan and making the circuit of the North Pacific. The result of these combined conditions is, however, important, for while in the E. the agriculturally valuable part of the country is somewhat strictly limited to the N., it becomes extremely wide in the W.; rendering it pretty evident to the speculative geographer, that when the country shall have become fully peopled in accordance with its natural capabilities, the greater part of its population will lie to the W. of its central line. In this respect Canada differs from the United States, in which the natural conditions seem to imply that the balance of population will continue to be in favour of that part of the continent to the E. of its central line.

From the description given above, it will be obvious that Canada is separable, by physical and climatic conditions, into regions which run approximately N. and S., with the general trend of the North American continent. The line of division between Canada and the United States is a somewhat arbitrary one, and each of the natural divisions is continued to the S. by a region more or less resembling it. The course of trade, or the exchange of products, thus takes an E. or W. direction, and the means of communication once provided, the diversity of conditions forms in itself the strongest material bond of union between unlike parts. One of the chief factors in tempering the climate of the fertile prairie of the interior is the fact that Hudson Bay, a vast body of salt water, 567,000 sq. M. in area, does not freeze over in winter.

Immigration. Canada has as yet only begun to realize the possibilities of her position and her abundant natural resources. Before the completion of the Canadian Pacific Railway, the great plains of the West and the province of British Columbia were exceedingly remote from the older and more thickly peopled provinces of the East. They were reached with difficulty, and the means of trans-

porting the products of the interior to the markets of the world were primitive or absent. The great area of prairie land, so eminently adapted to the growth of grain and the sustenance of domestic animals, necessarily lay fallow; while, with the exception of gold obtained from the superficial deposits and beds of streams and coal adjacent to the coast, the mineral wealth of British Columbia remained unknown or unworked. All this is now in process of change. The vast fertile area of the interior of the continent is being more and more opened up by new railways (comp., especially, pp. 262, 307) and is being peopled by immigrants from Europe, from the E. provinces of Canada itself, and from the United States, the Government and the railway companies offering every inducement to the intending settler†. The export of wheat, cattle, and other agricultural products from Manitoba, Alberta, and Saskatchewan is already large and is yearly growing in importance, and before many years, the last region of North America where free grants of land suitable for the growth of wheat can be obtained, will be owned and occupied throughout. In the broken country of British Columbia, the 'prospector' pursues his search for ores even in the farthest recesses of the mountains, and in the vicinity of the railway numerous mining-enterprises have been already established.

To the immigrant unskilled in mining or other special pursuits, but not afraid of hard work, the farming and 'ranching' lands of the Western Provinces are the most attractive. It cannot be denied that many difficulties have to be faced by a newcomer, particularly if ignorant of the methods of farming usually practised in Canada; but the rapidly rising tide of immigration from the British Isles and the United States proves that the value of the 'wheat lands' of the Canadian West has been recognised. By those accustomed to agriculture and with a certain amount of capital, lands already under cultivation may often be purchased in the E. provinces of the Dominion at moderate rates, and the difficulties of a first establishment on new land thus obviated.

Native Races. The native races of North America are generally referred to as *Indians*, a misnomer of early date which it is now impossible to eradicate. These people had, before the date of the discovery of the New World by civilized man, penetrated to and occupied every part of the continent; but where the natural resources available to them were small, the population remained exceedingly scanty, and a few families often required a vast tract of country for their support by the rude methods of hunting and fishing which, as a rule, were alone known to them. Within the limits of Canada no architectural monuments are met with resembling those remaining in Mexico, Central America, and Peru, as the result of the labour

† Canada is now obtaining about 50 per cent of the immigration from Great Britain to North America, as compared with 12-15 per cent a few years ago.

of the half-civilized races of these regions. A few burial mounds, an occasional surviving outline of some fortified work, with graves and scattered implements of stone or bone, constitute the traces of all former generations of the aborigines. In parts of the provinces of Ontario and Quebec, some rude agriculture was attempted by the natives even in prehistoric times, while on the W. coast substantial wooden lodges were built and a rudimentary form of art was manifested in the design of tools and implements and in carvings in wood. Elsewhere the inhabitants were little removed from the plane of savagery. The conditions of life were hard, and the circumstances for the development of a better constituted society were wanting. Wars and midnight forays between adjacent tribes make up such legendary history as has survived, and in the absence of any means of chronicling events, history even of this kind soon lapsed into mythology.

The Indians were divided into almost innumerable tribes, with distinctive names; but by means of a study of their language it becomes possible to unite many of these under wider groups, which the tribal units would not themselves have recognised.

Of these groups the *Eskimo* are the most northern and in many respects the most homogeneous. They held and still hold the whole Arctic littoral from Labrador to Bering Sea, but never spread far inland. To the S. of the Eskimo two great races divided between them the greater part of Canada; the *Algonkin* (or *Algonquin*) and the *Tinneh* or *Athapascan*.

The Algonkin peoples occupied a vast tract extending from the Atlantic coast to a line drawn from the mouth of the Churchill River on Hudson Bay in a S.W. direction to the Rocky Mountains. Of this stock were the *Micmacs* and *Malicetes* (or *Maliseets*) of Nova Scotia and New Brunswick, the *Abnakis*, the *Montagnais* of the lands to the N. of the Gulf of St. Lawrence, the *Ottawas*, the *Ojibwas* to the N. of the Great Lakes, and the *Crees*, in part inhabiting the great prairies and in part the adjacent woodlands to the N. The *Blackfoot* tribes of the extreme W. plains are also attached by language to the Algonkin race. To the N.W., the Tinneh peopled the entire inland region of the continent, including the Mackenzie valley and that of the Yukon. Among their numerous tribal divisions may be mentioned the *Beavers*, *Loucheux*, *Kutchin*, *Siccanies*, and *Takullies*.

Both the Algonkins and the Tinneh or Athapascans were hunters and fishermen, often roaming over vast distances in search of food and skins, and they can at no time have been numerous in proportion to the extent of territory they covered in their migrations.

Newfoundland was peopled by a race known as the *Beothuks*, now entirely extinct and of which very little is known. The St. Lawrence valley, from the vicinity of Quebec to Lake Huron, was held by the *Iroquois* or *Huron-Iroquois*, who appear to have con-

stituted a rather numerous population at the time of their discovery and were to some extent occupied in tillage, producing limited crops of maize, beans, pumpkins, and tobacco. They possessed fortified villages and were continually at war with the ruder Algonkin tribes to the N.

The *Dakota* or '*Sioux*' Indians, whose main home was to the S. of the 49th parallel, with their offshoot the *Assinibornes* or *Stoney*s, spread to the N., over a part of the Canadian great plains

The S. part of British Columbia was chiefly occupied by tribes now classified as belonging to the *Salish* stock, including the *Shuswaps*, *Lillooets*, *Okanagans*, and others. These tribes marched to the N. with the *Chilcotins* and *Takulies* of Tinneh affiliation.

In the S.E. corner of British Columbia the *Kootanies* appear to form a distinct linguistic division; while on the Pacific coast several different languages were spoken, and such maritime tribes as the *Haida*, *Tshimsian*, *Aht*, and *Kwakwöl* are found.

As progressing settlement and the borders of civilization have encroached on the native tribes, these have been from time to time granted reservations, and arrangements have been come to with them by which they abandoned their claims to their wide hunting-grounds. The compacts thus entered into with the Canadian Indians have been observed, and since the early days of the French occupation there has been scarcely any active hostility between the whites and these people.

In the E part of Canada some bands of the Indians have now settled upon the land, others find a more congenial occupation of a nomadic character as voyageurs, or lead a gipsy-like existence and make a living by manufacturing bark canoes, snow-shoes, moccasins, baskets, and such like articles. A certain number still retain their character as hunters and trappers in the N. wilderness; but those which are likely to be seen by the traveller have, by the admixture of white blood, ceased to present in any notable degree their original characteristics. To meet with the Indian more nearly in his native state, one must go to Manitoba, Alberta, Saskatchewan, the North-West Territories, or British Columbia.

On the plains of the N.W., the extinction of the buffalo has within a few years deprived the native races of practically their whole means of subsistence, and the Government has been obliged to provide them with food and clothing, though on certain reservations they are already taking to agricultural pursuits with more success than might have been argued from their original desultory mode of life. In the S. part of British Columbia the Indians are in some places proving to be industrious and capable of maintaining themselves in various ways. Upon the coast of the same province, the native fishermen, where the circumstances are favourable, readily adopt any mode of life by which a fair remuneration for their labour can be obtained. They are largely employed in salmon canneries,

in saw-mills, and in the fur-seal fishery, though in some of their more remote villages they still remain much in their pristine state. In the far N, the natives generally maintain their old habits, and though supplied with many of the manufactured products of civilization, they remain hunters, and depend for the means of purchasing commodities which they have now learned to prize upon the sale of peltries. These Indians, with a large part of the Eskimo, may be regarded as dependents on the Hudson's Bay Company, which to them represents Providence.

It is now known that many of the estimates made at various times of the Indian population have been greatly exaggerated, but it is impossible to state even approximately what their number may have been at the time of the discovery of the continent. In most regions they have undoubtedly diminished very materially, but in some places the enumerations made in late years show a stationary condition and in a few cases an actual increase. It would thus appear, that though in certain districts the aborigines may lose their identity by blending with the white population, they are not likely in Canada to disappear or become extinct. There are many avocations to which their habits and mode of thought peculiarly adapt them, and Canada includes a great area in which the lore of the Indians is likely to remain for all time the greatest wisdom.

The total number of Indians now included within the boundaries of the Dominion is estimated at about 107,000.

X. Sports and Pastimes.

By

E. T. D. Chambers and W. H. Fuller.

Fishing. The Dominion of Canada may be justly regarded as the Paradise of the angler. Landing at the historic city of Quebec in the spring or early summer, the lover of Isaac Walton's gentle art will find himself within easy distance of hundreds of limpid lakes, varying from a few acres to miles in extent, set like gems in the midst of forests as yet hardly touched by the axe, and teeming with speckled trout, lake trout, and black bass, of a capacity and size to thrill with joy the heart of the angler accustomed only to the shy and puny denizens of English streams. Most of these lakes are free to all-comers, but a few of the most easily accessible are in the hands of private parties who have formed fishing-clubs, erected club-houses, and make a faint pretence of preserving the waters. The tourist, with any ordinary letters of introduction, will find no difficulty in obtaining permission to fish these lakes, the hospitality of Canadians in this regard being proverbial.

Should, however, the visitor prefer to taste the delights of the wild wood unfettered by the restraints of civilization, he may engage a couple of guides, provide himself with a tent, a birch-bark

canoe, and a few simple cooking-utensils, and in a few hours find himself encamped beneath the shade of the 'forest primæval', apparently as far removed from the trammels of society as though he were in the interior of the 'Dark Continent'. The cost of such a trip will, of course, vary according to the requirements of the tourist, but it may be kept within very moderate limits. The wages of the guides will be from \$1.50 to \$2 per day. A birch-bark canoe of the requisite size can be bought for about \$20 and should be readily resold for about half its original cost; but, if preferred, the guides will provide this, as well as a tent, charging a moderate sum for their use during the trip. Cooking-utensils, including the indispensable frying-pan, which plays so important a part in Canadian forest cookery, will cost only a trifle; while for provisions the true woodsman will content himself with a flitch of bacon, a few pieces of fat salt pork, flour, tea, and such a supply of canned vegetables and fruit as his tastes and the length of his stay may call for. These, supplemented by the product of his rod and line, should amply suffice for the needs of a genuine sportsman, and as there will probably be a few scattered settlers in the vicinity of his camping ground from whom eggs, milk, potatoes, and, occasionally, butter may be procured, all the reasonable requirements of the inner man will be fully satisfied. Worcester sauce is, curiously enough, almost always taken. The sportsman should also be careful to furnish himself with a mosquito net for protection at night against the assaults of these little winged pests, which otherwise would prove a serious drawback to his enjoyment.

The fishing for *Trout* (*Salmo fontinalis*; speckled or brook trout) is at its best as soon as the ice is fairly out of the lakes — viz. about the middle of May and during the month of June and early part of July, when the fish are found in the shallow water and rise readily to the fly. Later, as the water becomes warm, they seek the deeper parts of the lakes and are only to be captured by deep trolling and bait-fishing, until towards the middle of September, when instinct impels them to the vicinity of their spawning-grounds. The angler in Canadian lakes need give himself but little concern about the character of the artificial flies he requires for his trip. A dozen varieties of medium size are all he will need, and these can readily be obtained in the local shops. The Canadian trout, unlike their British brethren, are not fastidious. They, however, rank with the finest trout in the world for beauty of form and marking and for excellence of flesh. Specimens of 5-6 lbs. are considered large, but they sometimes reach double that weight.

Should the angler seek a nobler quarry, he can betake himself to the beautiful Lake St. John (p. 164), the home of the famous *Ouanamche* ('Wah-na-nish'), the fresh-water salmon of Canada. This is a true *Salmo salar*, which has never run down to the sea from its original fresh-water habitat. It bears a strong resemblance

to its supposed progeny, — the salmon of the sea, whom it excels in rapacity and gameness, but it rarely exceeds six or seven pounds in weight (comp. p. 164).

The tributaries of the St. Lawrence, especially those on the N. shore of this noble river, have long been famous for their *Salmon* (*Salmo salar*) fishing. They are, however, almost entirely held by private owners; and, as the pools are limited in number, it is not easy to obtain leave to capture this monarch of game fish. There are still, however, many fair streams where fishing may be hired by the day or for longer periods. The outlets of these rivers abound with *Sea Trout* (*Salvelinus fontinalis*) of large size, which come in with each tide and afford fine sport to the angler, as they rise freely to the fly and are commonly taken from three to six pounds in weight. This fishing is open to all and is at its best from the latter part of June to the end of July, though the trout continue to run up the rivers for the purpose of spawning till September. These S. shore salmon and sea-trout streams are easily reached by means of the Intercolonial Railway (see R. 24), which forms a direct route to the fishing and summer resorts of the lower St. Lawrence and Baie des Chaleurs as well as to those of New Brunswick and Nova Scotia. Both these last-mentioned provinces abound in lakes and streams, most of them well stocked with trout of large size. They are free to all legitimate fishermen. For some account of the fine salmon and trout fishing of the New Brunswick rivers Restigouche, Nipisiguit, Miramichi, and Tobique, comp. pp. 90, 89, 88, and 40. See also p. 38.

The *Lake Trout* (*S. namaycush*; also called salmon-trout, forked tail trout, and touladi) is the prevailing trout in Canada and sometimes attains a weight of 40 lbs. It rarely rises to the fly, and is generally taken by trolling or by bait-hooks sunk near the bottom of the river.

The *Pike* (*Esox lucius*) is similar to the English variety and is widely scattered. In some of the tributaries of Lake St. John it has been taken nearly 50 lbs. in weight. — The *Maskinonge* (*Esox nobilior*), the largest member of the pike family, prevails extensively in the St. Lawrence, the Ottawa, Lake Memphremagog (p. 18), and many other waters.

The *Perch* (*Perca fluviatilis*), the *Ououtouche* (*Semotilus bullaris*), and the *Pickereel* or *Doré* (*Stizostedion vitreum*) are also widely distributed and afford good sport.

As the traveller proceeds towards the W. he will find in the vicinity of Ottawa, the political capital of the Dominion, scores of lakes, similar in character to those already described, some of them abounding in *Black Bass* (*Micropterus Dolomiei*) from two to six pounds in weight, the larger size being by no means rare. These are most readily captured by trolling or fishing with a live minnow, though during the month of July they take the fly readily. Catches

of thirty or forty of these game fish to a single rod in the course of a few hours are not uncommon; and the struggles of a five pound bass on a light fly-rod will afford the angler a sensation he will not readily forget. Their flesh is excellent eating. This region also has lately been made easily accessible by the construction of the Gracefield branch of the Canadian Pacific Railway, which has been extended to the head-waters of the Gatineau river through a district hitherto trodden only by the lumberman and a few wandering Indians (see p. 182). — Another famous sporting-district, heretofore difficult of access, has been opened up by the Parry Sound branch of the Grand Trunk Railway (comp R 41). This line runs from Ottawa to Parry Sound on Georgian Bay and passes through the famous sporting-districts of Muskoka and Opeongo. — The Rideau Lakes (p 183) are also within easy reach of Ottawa and abound with black bass, pickerel, and lake-trout.

All along the lines of the Canadian Pacific and Grand Trunk Railways the tourist as he wends his way towards the N.W. will have ample opportunity of indulging his piscatory tastes. From Toronto the great range of the Muskoka and Kawartha Lakes lies open to the angler and can be reached with ease and comfort (comp. R. 40 and p. 187). All these lakes teem with fish, and the sportsman can either take up his abode in one of the numerous hostelries, with which the shores of the principal lakes are studded, or camp in comparative solitude on one of the many islands. — The waters of the Temagami region (p. 237) abound in trout and bass.

Moving on to the W. along the line of the Canadian Pacific Railway, the traveller crosses numberless lakes and rivers, most of them abounding in fish. On many of the best fishing-streams, where the dense forest made access almost impossible except to the experienced woodsman, the railway company has cut 'trails' (paths) leading direct to the best fishing-points; but the angler will probably prefer to push on to Nipigon Station (p. 235), situated on the famous trout river of that name. The reputation of this wonderful stream has been so widely spread among the followers of the gentle art, that detail is unnecessary. Suffice it to say that speckled trout three, four, five pounds in weight are common, while even eight-pounders are occasionally taken. *Whitefish* (*Coregonus clupeiformis*) also afford fine sport in this district. They rise freely at small flies and run as high as three pounds in weight. They resemble much the grayling of the English streams, having very tender mouths and requiring skilful handling before they can be landed. Away onward from this point to Winnipeg there is a succession of lakes and streams, a description of which would be only a repetition of what has already been written.

Most of the prairie streams and lakes near Winnipeg are well stocked with trout, pike, pickerel, black bass, and other fish. Farther to the W., at Calgary (p. 256), fine fishing for mountain-trout

may be obtained in the Bow and its tributaries. Banff (p. 258) is another excellent sporting-centre, which offers the additional inducement of luxurious accommodation in its fine hotel. The Lower Kootenay River (p. 288), still farther to the West, teems with mountain-trout of fair size. The Canadian Pacific Railway Co. has built several fishing-camps on the river between Robson and Nelson, each with accommodation for 6-8 persons, while camp-supplies may be obtained at the Company's store in Robson. There is also good fly-fishing at several points nearer the coast, notably at Coquitlan, 17 M. by train from Westminster Junction (p. 284), where there is a good hotel. The Capilano and Seymour creeks, across the bay from Vancouver (p. 284, ferry, see p. 285), afford good trout-fishing. Large numbers of salmon are caught in the bay by trolling, as the Pacific Coast salmon will not rise to a fly, but this mode of capture will hardly commend itself to the genuine sportsman.

Shooting. In the foregoing remarks reference has been made only to fishing, that being the sport most readily available to the tourist, and coming within the scope of an ordinary summer trip.

Shooting in Canada does not, as a rule, commence before Sept. 1st, but it may be said here that in most of the districts already referred to, good sport with rifle and shot gun can be had in the proper seasons, which may be ascertained by a glance at the synopsis of the Game Laws of the various provinces annexed to this article (p. lxi).

Nothing can surpass the charm of a hunting-trip in the Canadian woods during the months of Sept. and October. The forest-trees are beginning to don their gorgeous fall livery; the air, fresh and balmy during the day, is yet sufficiently crisp and bracing at night and early morning to make the blazing camp-fire thoroughly enjoyable; while the winged pests, which detract so much from the sportsman's enjoyment during the summer months, have beaten a retreat to their winter quarters.

The chief ambition of the sportsman on his first visit to Canada will probably be to kill a *Moose* (*Alces Americanus*), the male of which is frequently 8ft. high, weighs 1500lbs., and has horns weighing 60-70lbs and measuring 5-6ft. from tip to tip. Good moose heads and antlers are sometimes valued at \$100-300, even in Montreal or Quebec. In Sept. and Oct. moose are often surprised and killed while wading in the cool waters of inland lakes, where they feed on the roots and stems of aquatic plants. Like the red deer (see p. liv) the moose 'yard' in winter, the yard consisting of a cedar or spruce swamp, round or through which they make beaten tracks in their rambling. They are thus easily traced by the guides, when once the yard has been discovered. A yard sometimes contains 40 or 50 animals. After a fresh fall of snow, hunters on snowshoes can easily overtake the moose, whose great weight causes them to sink in the snow. Indian and half-breed guides frequently

attract moose by imitating their cry. The animal crashes passionately towards the sound and meets its doom. A repeating rifle is a necessity, for a wounded bull-moose will turn upon his assailant. In no case need the hunter expect to kill this monarch of the forest without the expenditure of much labour and skill, and a true eye and steady nerve are required for the final shot.

Perhaps the moose-hunter cannot do better than make his first essay in Nova Scotia. There are three recognised sporting-districts in this province: the Northern, which comprises the counties of Cumberland and Colchester, the Eastern, which includes portions of East Halifax, Guysborough, and Pictou, and the Western, which takes in all the country to the W. of a line drawn from Halifax to Yarmouth. Of these districts the last is probably the best, and moose are reported 'plentiful' and increasing in numbers. The immense extent of wild and uncultivable land in Quebec and Labrador, stretching N. to Hudson Strait and Bay, is another enormous game preserve in which the moose occurs in large numbers. Moose abound in the country traversed by the Lake St. John Railway (R. 32), and one of the large feeders of Lake St. John is named Ashouapmouchouan (p. 164), or 'river where they hunt the moose'. This noble game is also plentiful near Lake Abitibi (p. 240), and Mattawa (p. 232) is a noted centre for British and American moose-hunters.

The *Caribou* (*Tarandus hostilis*), of which adults weigh 300-500 lbs., is even more widely distributed than the moose, occurring in nearly all the unsettled parts of Quebec, Nova Scotia, New Brunswick, and Ontario, as well as in the North West Territories and British Columbia. In Quebec the most popular caribou grounds are on and about Les Jardins, near the headwaters of Murray Bay River and now included in the Laurentides National Park (p. 163). The name is derived from the luxuriant growth of coarse grass, which is sprinkled with occasional clumps of bushes and trees, forming admirable screens for the hunter. The district is reached by a drive of 40 M. from Baie St. Paul (p. 167) and a subsequent tramp of a few miles through wood. Another excellent hunting-ground for caribou is at La Belle Rivière, to the S. E. of Lake St. John. In the wilds about Ungava Bay, peopled exclusively by Eskimo and Indians, the caribou is shot late in autumn by hundreds and thousands, the officials of the Hudson's Bay Co. at Fort Chimo depending principally on its flesh for subsistence during winter.

The common *Red Deer* (*Cervus Virginianus*), which is much smaller than the caribou and by far the most graceful of the American Cervidæ, occurs in all provinces of the Dominion except Nova Scotia and Prince Edward Island. In Quebec it prevails on the S. of the St. Lawrence, towards the frontiers of Maine. To the N. of the St. Lawrence it occurs mainly in the W. part of the province, between the St. Maurice and the Ottawa, but of late years it has also been found in the country to the N. of the city of Quebec. Red deer are so

plentiful in the Metapedia Valley (p. 91), that they sometimes run for miles in front of the trains of the Intercolonial Railway (R. 24).

The *Black Bear* (*Ursus Americanus*) is common all over Canada. It hibernates in winter, but may be met and killed at any other time of the year. Unless attacked, it usually flees before the hunter, but invades farm settlements at night, carrying off sheep and calves. It is often shot while swimming rivers. At Lake Timiskaming (p. 239) three sportsmen recently killed seven bears in one afternoon. It is abundant in the Saguenay country and near Lake St. John and the rivers that feed it. The fur is highly prized.

The principal fur-bearing animals are the *Beaver* (*Castor Canadensis*), the *Mink* (*Putorius vison*), the *Otter* (*Lutra Canadensis*), and the *Marten* (*Mustela Americana*). None of these may be killed between April 1st and Nov. 1st.

The *Canadian Hare* (*Lepus Americanus*) is smaller than the English hare, being little larger than a rabbit, and turns white in winter. It is not so plentiful as formerly, snaring being allowed and freely practised.

Good fowling may be obtained in almost every part of Canada, though game-birds of all kinds are naturally scarcer in the vicinity of large cities. *Duck* and *Snipe* abound in Nova Scotia. *English Pheasants* have lately been imported by the Halifax Fish and Game Club and into parts of Ontario and British Columbia, they are said to stand the winter well and to be increasing rapidly. New Brunswick offers equal inducements to the sportsman. The best localities are traversed by the New Brunswick Railway, now embodied in the Canadian Pacific System (R. 16). On the upper Tobique (p. 40) and a few miles back in the woods moose and bear are numerous. A village of Abnaki Indians is located at the confluence of the rivers, and the residents have a good reputation as reliable guides.

In the district to the S., W., and E. of Lake St. John (R. 32) excellent sport may be had with moose, caribou, bear, duck, and *Ruffed Grouse* (*Bonasa umbellus*). These, added to the incomparable ouananiche fishing (p. 1), should form a bill of fare calculated to satisfy the most *exigeant* sportsman. The districts adjoining most of the summer-resorts on the lower St. Lawrence offer similar inducements.

In the neighbourhood of Three Rivers (p. 139) and Sorel (p. 143) capital duck, snipe, and woodcock shooting may be had in the marshes bordering on the river, and a few days may profitably be spent in these localities.

The Rideau Lakes and River (p. 133), within a short distance of the city of Ottawa, afford very fair sport with duck and snipe, while a short distance inland from the margin of the lakes a fair number of deer may be obtained. The easy access to this district from the city, though convenient for the tourist whose time is limited, militates to some extent against the increase of the game.

The district already referred to as being opened up by the Gracefield branch of the Canadian Pacific Railway (see p. li) affords a new and almost virgin field to the sportsman. The forests all along the line of the railway abound with deer, caribou, and bear, while a short distance to the N. of the terminus of the line, moose are said to be plentiful.

The region of Parry Sound (pp. 204, 198, 223), Georgian Bay (p. 223), and the Muskoka Lakes (R. 40) are now so much frequented by summer-visitors that good shooting is not so plentiful as it was a few years ago; still, fair sport can be obtained by the tourist who desues to combine the comforts of civilized life with the pleasures of the chase.

Sharbot Lake (p. 187), easily reached from Ottawa, is a noted place for duck, which seem to make it a resting-place during their journey to their breeding-grounds farther to the N. Very heavy bags are frequently made there. — All the extensive chain of lakes in the neighbourhood of the town of Peterborough (p. 187) and lying to the N. of the river Trent (p. 189) afford good sport for fowling-piece and rod. All these localities are accessible by means of the Canadian Pacific and Grand Trunk Railways. — Farther to the W., in a portion of the country lying between London (p. 207) and Chatham (p. 207), *Wild Turkey* may still be found. *Quail* (*Ortyx Virginianus*) abound in this district; but, as is usually the case in the neighbourhood of all populous towns, they are subjected to too much shooting and are likely ere long to become scarce. They afford excellent sport over good dogs.

Below Chatham are the famous Lake St. Clair marshes (p. 207), where a good shot will frequently kill over a hundred big duck in a single day's shooting. The finest portions of the marshes are strictly preserved, but good mixed bags of woodcock, snipe, quail, plover, and duck may be made at other points on the lake. Wild geese are plentiful in the spring and are usually shot from 'blinds' erected on the line of flight. Hotel accommodation can be had in the neighbourhood.

All the tributaries of the Ottawa River (RR. 37, 48) afford good sport for gun and rod and have the advantage of being within easy distance of central points. Ottawa is as good a point as any for the sportsman's headquarters, while farther up the main line of the Canadian Pacific Railway the thriving town of Pembroke (p. 231) offers an excellent '*point d'appui*'. — Moving to the W. along the transcontinental line, we come to Mattawa (p. 232), a good starting-point for the big game country. Deer abound, as also do black bear, while moose are as plentiful as that noble animal can reasonably be expected to be (comp. p. lii). Guides, boats, and canoes can readily be obtained here. Lake Timiskaming (p. 239), easily reached from this point, is surrounded by virgin forests abounding in game, moose, caribou, and bear. — Following up the main line of the rail-

way, we reach North Bay (p. 233); also a station on the Grand Trunk Railway, from which the new Timiskaming and Northern Ontario Railway runs into the heart of the picturesque Temagami country, where splendid sport with fur and feathered game may be had.

From this point onwards to Winnipeg there is a succession of lakes and streams, fishing and shooting grounds, a description of which would only be a repetition of what has already been said; but as soon as the capital town of Manitoba is reached the conditions become entirely changed. Now we have a vast expanse of rolling prairie land, nearly 1000 M. wide, dotted over with numberless lakes and swales which have for centuries past been the resort of the migratory water-fowl on their journeys to their breeding-grounds in the far North. Here the true sportsman, who enjoys watching the working of his well-trained dogs almost as much as the shooting itself, will find sport of a varied character and may safely count on a well-filled bag within a few hours' journey from Winnipeg. Duck and geese of every variety, *Snipe*, *Golden Plover*, and *Prairie Chicken* (*Cupidonia cupido*) abound, while farther afield, in the extreme East of Manitoba, there is a fine country for moose. Taking the town of Winnipeg as a starting-point, the sportsman can have a choice of an infinite variety of trips according to the character of the game he wishes to pursue. Everything necessary for these excursions can readily be procured at Winnipeg (comp. pp. 249, 250). Shoal Lake (p. 250) abounds in wild-fowl, while in the unsettled country to the N. of the lake are many *Black-tail Deer* (*Cervus macrotis*) and a few moose and elk. Whitewater Lake, Lake Winnipeg (p. 250), and Lake Manitoba (p. 251) afford enormous bags of wild ducks, and big game can be had in the vicinity.

Father to the W, near Maple Creek (p. 255) and Medicine Hat (p. 255), is what is known as the 'Antelope Country', and to the N. of Calgary (p. 256) is the 'Red-deer Region', a fine one for big game, though as yet seldom visited.

Away through the heart of the Rocky Mountains, in the midst of the grandest scenery the world has to show, the ardent sportsman will find farther varieties of game. The *Wapiti* or *American Elk* (*Cervus Canadensis*), moose, deer, caribou, *Mountain Sheep* (*Ovis Canadensis*), *Mountain Goat* (*Haploceros*), and even the *Grizzly Bear* (*Ursus horribilis*), monarch of the mountains, may fall before his rifle. The construction of the railway through the Rockies has naturally driven back the game some little distance from the track, but there are numerous places along the line, whence the resorts of the big game can easily be reached, with the help of local guides. The railway officials will always be found ready to give information and facilities to sportsmen. Laggan (p. 268) and Field (p. 271) are the best points, and Banff (p. 258) is also a good centre. The

steamers ascending the Columbia from Golden (p. 273) afford access to a fine game country. There is always a fair chance of meeting mountain goat and sheep in the Asulkan district (p. 276), where the railway company has erected a roomy chalet.

On Vancouver Island, within a short distance of Victoria (p. 289), grouse and quail are plentiful; while a short journey into the interior of the island brings us to the ranges frequented by deer and bear.

It should be borne in mind by the sportsmen who propose to hunt the 'big game' of Canada that repeating rifles of the heaviest make will be found the most desirable.

In addition to the above article, the sportsman should consult the excellent pamphlets on shooting and fishing, published and distributed (usually gratis) by the Canadian Pacific, the Grand Trunk, the Inter-colonial, and other railway companies.

Lacrosse is the national game of Canada and takes precedence of all others in the public estimation. It is a modern variation of the 'ball game' as originally played by some of the Indian tribes and described by various writers. It demands great skill, activity, and endurance, and is unquestionably one of the most attractive of all pastimes for the onlooker, being full of incident, simple in its nature, and 'easily understood of the people'. The *National Lacrosse Union*, comprising representatives of the principal clubs in Ontario and Quebec, regulates the dates and locality, and establishes the rules, of the annual matches for the championship. A championship match usually brings together an immense crowd of spectators.

The leading lacrosse clubs of Canada have recently adopted a rule allowing what is virtually professionalism. By its terms paid players may play with amateurs, but the former are to be styled 'employees' of the club to which they belong, and are, as such, to be in every way subservient to its orders. It is feared that this pernicious example may affect other Canadian sports. For the benefit of the English reader, it may be explained that there is no real analogy between this action and the playing of a professional on an English cricket team, since the paid lacrosse players are not instructors or coaches.

The enthusiasm of the spectators for a favourite club is sometimes carried to excess, and some of the principal matches have lately been disgraced by a rowdiness which, if not put down with a strong hand, cannot fail to bring the game into disrepute. A match lasts $1\frac{1}{2}$ hr., and a rest of 5 min. is allowed after each game lasting 3 min. or more.

Cricket. The principal clubs are those of Toronto, Montreal, Ottawa, Quebec, Winnipeg, Victoria, St. John, and Halifax. There is an *Association*, which selects players to represent All Canada in the annual match with the United States and against other visiting teams. The game, however, excites little general interest.

Golf is played at Quebec, Montreal, Ottawa, Kingston, and Toronto. The Quebec Club is the oldest, dating from upwards of 20 years ago (links, see p. 154). Montreal ranks next in seniority (p. 127), while the other clubs are of comparatively recent origin. Great interest has, of late, been taken in the game; and visiting

golfers may be assured of a warm welcome. Inter-Provincial and International (with the United States) Tournaments promise to be annual events. The St. Andrews rules are generally followed.

Hockey is played in Canada only as a winter-game, and the expertness of Canadian skaters makes a well-contested match an extremely graceful and interesting sight. There is much rivalry between the clubs of the different cities. Canadian players rank as the most skilful in the world and are much sought after by United States Clubs.

Skating can be enjoyed to perfection in Canada from Dec. to March. Almost every city or town has one or more covered skating-rinks (comp. p. 126), which are well attended by both sexes. Most of them are lighted by electricity; and the fancy-dress carnivals held in them afford a unique and very attractive spectacle.

Snowshoeing. Every town in Canada has its snowshoe club, and in the cities and larger towns they are numerous. Each club has its distinctive uniform of bright-coloured blanket-coat and 'tuque' (cowl), so that a procession of snowshoers tramping across the snow on a clear moonlight night, rousing the echoes with their songs and choruses, is a most attractive sight, and one not to be witnessed outside of the Dominion of Canada. The art of walking on snowshoes is not quite as easy as it looks, but can be acquired after a little practice.

Tobogganing is an extremely popular winter amusement in Canada with all classes, from the small boy who slides down a steep hill on his 'bob-sled' to the élite of society who flock to Rideau Hall on Saturday afternoons to enjoy the facilities afforded by the viceregal slides. A 'toboggan' is constructed of thin pieces of board about 18 inches wide, curved upwards at one end and varying in length from 4 to 8 ft., according to the number of persons it is designed to carry. A long cushion is placed on it for the passengers; and the frail conveyance rushes down the snow-covered declivity at the speed of an express train. The steersman, in the rear, directs its course with hands or feet. The sport is most exhilarating and has a sufficient spice of danger to make it exciting. The toboggan is an invention of the Indians, who use it to drag burdens along the snow.

Yachting and Boating. Toronto is the headquarters of these sports, its fine lake-frontage affording special facilities for regattas. A yacht club and several rowing-clubs are located here (comp. pp. 191, 197). Halifax and Montreal are other yachting-centres (pp. 50, 127), and there are rowing and canoe clubs at Ottawa, Lachine (p. 230), and other places. Numerous regattas, open to all amateurs, are held annually. The Royal St. Lawrence Yacht Club has eight times (in nine races) won the 'Seawanhaka International Challenge Cup', which is for 'twenty-five footers' what the America

Cup is for large yachts; but in 1905 it lost it to the Manchester Yacht Club of the United States.

Curling is seen at its fullest perfection in Canada. In Quebec and E. Ontario metal 'stones' are in vogue instead of the granite ones commonly used in Scotland. Nearly all the Canadian rinks are in covered buildings; and, as the ice is very carefully looked after, a nicety of play is attainable that would be a revelation to old-fashioned curlers accustomed to the rough-and-ready style of the open-air game. Montreal has three curling clubs (p. 127), each with a large membership and a commodious club-house. Ottawa has also three, including the 'Governor-General's Club', with a private rink attached to the viceregal residence (p. 180). Quebec has two important clubs. Many of the smaller towns also boast of rinks. Matches between the various clubs are frequent throughout the winter. The great event is the Winnipeg Bonspiel, held in Feb., to which curlers flock from Milwaukee, St. Paul, and E. Canada. The rules observed are those of the 'Royal Caledonian Curling Club'.

Football flourishes in Canada, and clubs exist in all the principal cities. The Rugby Union rules are most generally adopted, but the Association game is fast gaining ground.

Cycling is not so much in vogue as it would be if the country-roads were better. Perhaps the best roads are found in the Maritime Provinces, especially near Halifax. There are clubs in most of the larger cities, and annual race-meetings are held. The chief organisation is the *Canadian Touring Club*.

Motoring is steadily on the increase in Canada, though somewhat interfered with by the inferiority of many rural roads.

Bowling is practised in all the large cities, usually in clubs belonging to the athletic associations.

Baseball has gained a good footing in Canada, and it is now fast increasing in popularity.

Athletics. Several athletic clubs of considerable importance have their headquarters in Canada — notably those of Montreal, Ottawa, and Toronto — and are rapidly increasing in size and influence. They own commodious club-houses and extend a cordial welcome to all visiting athletes.

Lawn Tennis still lags behind that of Great Britain or the United States. Clubs exist in most of the principal towns and cities, but there is not much general enthusiasm about the game. An annual tournament is held under the auspices of the *Canada Lawn Tennis Association*; and the 'Queen's Tournament', which takes place in Aug. at Niagara-on-the-Lake (p. 208), also attracts many competitors.

Horse Racing. Flat races and steeple-chases take place in Montreal during spring and autumn, under the auspices of the Hunt

Club (p. 127); but the most important race-meeting is that held on the late Queen Victoria's birthday at Toronto, when the 'King's Plate' is contested. — Trotting races are frequently held both in summer and winter, but seldom possess more than a local interest.

**Summary of Fish and Game Laws.
Close Seasons**

Ontario. For salmon, lake-trout, and whitefish, Nov. 1st. to 30th. Speckled trout (brook or river), Sept 15th to May 1st Bass, pickerel and maskinonge, April 15th to June 15th — Ducks of all kinds, Dec. 15th to Sept 1st. — Deer may be killed only between Nov 1st and Nov. 15th. — Hunting-license for non residents \$ 25

Quebec. Salmon, Aug 15th to Feb. 1st. Speckled trout, Oct. 1st to May 1st Lake-trout, Oct. 15th to Dec. 1st Ouaniche, Oct. 1st to Dec. 1st. Net-fishing is entirely prohibited — Duck of all kinds, March 1st to Sept 1st. — Caribou, Feb. 1st to Sept. 1st Moose and deer, Jan. 1st to Sept 1st. The hunting of these animals with dogs is prohibited, and not more than one moose, two caribou, and two deer may be killed by one person in a season. The export of deer and all game birds is forbidden. Licenses for non-residents, \$ 10 (fishing) and \$ 20 (shooting).

New Brunswick Moose, caribou, deer, Nov 30th to Sept. 15th. Cow-moose protected at all times — Other provisions similar to those of Quebec — License required from non-residents for hunting and shooting. Fee \$50

Nova Scotia. Moose and caribou from Jan. 1st to Sept 15th. No person may kill more than two moose and four caribou during any one season No hunting with dogs allowed. — Salmon, Aug 15th to Feb. 1st. Trout, Oct 1st to April 1st — License required for non-residents.

Prince Edward Island. Speckled trout, Oct 1st to Dec 1st Salmon-trout and whitefish, Oct 15th to Nov. 30th. Smelts, April 1st to July 1st Sturgeon, May 15th to July 15th

Manitoba. Deer, Dec. 15th to Dec. 1st — Duck of all kinds, Jan. 1st to Sept. 15th Woodcock, plover, and snipe, Jan. 1st to Aug. 1st — Lake-trout and whitefish, Oct 5th to Dec 15th. Speckled trout, Sept. 15th to May 1st. Maskinonge, April 15th to June 15th

North West Territories. Elk, moose, caribou, antelope, and mountain sheep, Nov. 15th to Oct. 1st Limit, six head to each person during one season — Duck, geese, and snipe, May 5th to Aug 23rd. Grouse, partridge, pheasant, and prairie chicken, Dec 15th to Sept. 15th. — License-fee for non-residents \$25 for a general license, \$15 for a bird license — Speckled trout, Oct 1st to Jan. 1st

British Columbia. Deer, elk, caribou, mountain sheep, and mountain goats, Dec. 15th to Aug 31st. Cow-elk protected at all times. — Grouse, partridge, pheasant, prairie fowl, and quail, Jan. 1st to Sept 1st. Hen-pheasant protected at all times. — Trout, Oct. 15th to March 15th

XI. Bibliography.

The following is a very small selection of the most recent, interesting, and easily accessible books on some of the main topics on which visitors to Canada should be informed. A few of the best records of the impressions of English travellers are included. Numerous other works of local interest are referred to throughout the text of the Handbook.

The visitor to Canada, who wishes thoroughly and intelligently to enjoy his tour, should certainly be familiar with the fascinating pages in

which *Francis Parkman* (d 1893) tells the romantic story of the rise and fall of the French Dominion in Canada. Arranged in the chronological order of their subjects, his works are as follows — 'The Pioneers of France in the New World' (1512-1635); 'The Jesuits in North America' (1634-70); 'La Salle and the Discovery of the Great West' (1643-89), 'Count Frontenac and New France under Louis XIV.' (1620-1701); 'The Old Régime in Canada' (1653-1763), 'A Half-Century of Conflict' (1700-48); 'Montcalm and Wolfe' (1745-64), and 'The Conspiracy of Pontiac' (1763-1769). Mr. Parkman made extensive use of the Archives of the French Ministry of Marine, of the 'Jesuit Relations', of the accounts of the voyages of Cartier, Champlain, etc., and of French and Canadian state-papers of all kinds. 'The Romance of Canadian History', edited by *P. Edgar* (1904), is a series of extracts from Parkman's works arranged so as to form a short consecutive narrative. — For the utilization of more recently discovered manuscripts bearing upon the heroic period of Canadian history, comp the works by *Dr. A. G. Doughty* and by *Major William Wood* mentioned at p. 147. See also the annual 'Review of Historical Publications relating to Canada', by *G. M. Wrong* and *H. H. Langton*.

The most comprehensive history of Canada is that of *William Kingsford, LL. D.*, the tenth and last vol. of which, reaching to 1841, was published in 1898 — Other histories are those of *J. M. McMullen* (covering the period 1492-1892, new edit., 1892), *Dent* (1840-82; pub 1883), *Bourinot* (1760-1900; pub. 1900), *A. G. Bradley* (1900), *C. P. Lucas* (War of 1812; pub. 1906), *F. X. Garneau* (1492-1840; 4th edit., 1883), the *Abbé Ferland* (1534-1763; 2nd ed., 1832), and *Réveillaud* (1504-1851; pub 1888), the last three in French. The student may also consult *Justin Winsor's* 'Narrative and Critical History of America'. Among the best manuals are 'The Story of Canada' by *Sur J. G. Bourinot* ('Story of the Nations' Series, 1896; revised and extended edition, 1901), and the 'History of Canada' by *Prof. Charles Roberts* (1897). Comp. also *Bourinot's* 'How Canada is Governed' (1896) and 'Manual of the Constitutional History of Canada', and *Clement's* 'Canadian Constitution' (1892). 'The Makers of Canada' is a somewhat unequal series of biographies published by *Morang & Co.* of Toronto. — Among other works that may be mentioned in this connection are *Goldwin Smith's* 'Canada and the Canadian Question' (1891), *Sur Charles Dilke's* 'Greater Britain' (2nd ed., 1885), *Richard Jebb's* 'Studies in Colonial Nationalism' (1905), *Prof. Seeley's* 'Expansion of England' (1883), *Bradshaw's* 'Self-government in Canada and how it was obtained' (1903), and *Holland's* 'Imperium et Libertas' (1901). — *F. A. McCord's* 'Handbook of Canadian Dates' (1888) and the 'Canadian Annual Review of Public Affairs' (by *J. C. Hopkins*) may be found useful.

Among descriptive works the first place may be given to 'Picturesque Canada' (1884), a large and handsomely illustrated work, edited by the late *Principal G. M. Grant*. Among other more or less recent books of description and travel are 'Canada in the Twentieth Century', an excellent general account of Canada and Canadian life by *A. G. Bradley* (1904); 'Canada To-Day', by *John A. Hobson* (London, 1906); 'Canadian Life in Town and Country', by *Henry J. Morgan* and *Lawrence J. Burpee* (1905); 'The Dominion of Canada', by *Charles Marshall* (1871), 'Canadian Pictures', by the *Marquis of Lorne* (1885), 'Canada as it is', by *John Foster Fraser* (1905); 'Ocean to Ocean', by *G. M. Grant* (1877), 'The Barren Grounds of Northern Canada', and 'Through the Sub-Arctic Forest', by *Warburton Pile* (1891 & 1896), 'On Snow-shoes to the Barren Grounds', by *Caspar Whitney* (1896); 'Camp Fires in the Canadian Rockies', by *Wm. T. Hornaday* (1905), 'The Great Lone Land' and 'The Wild North Land', by *Capt. W. F. Butler* (1873-4); 'Sport and Travel in the Northland of Canada', by *David T. Handury* (1904); 'New Land', by *Otto Sverdrup* (1904); 'Hudson Bay, or Every-Day Life in the Wilds of North America', by *R. M. Balantyne*; 'Fifteen Years' Sport and Life in the Hunting Grounds of Western America and British Columbia', by *W. A. Bailie Grohman* (1900); 'By Track and Trail through Canada', by *Eduard Roper* (1891); 'Through Canada in Harvest Time', by *James Lumsden* (1903); 'Travels and Adventures in Canada and the Indian Territories', by *Alex. Henry* (new edit., by James

Bain; 1901); 'The Great Dominion', by *G. R. Parkin* (1895), 'Through the Barren Lands' (1896) and 'Across the Subarctics of Canada' (2nd ed., 1906), by *J. B. Tyrrell*; 'Canada, Britain's largest Colony', by *A. L. Haydon* (1905); 'Our Canadian Heritage', by *Wighman* (1905); '3800 Miles across Canada', by *J. W. C. Haldane* (1900); 'Greater Canada', by *E. B. Osborn* (1900); and 'The North-West Passage by Land', by *Viscount Milton* and *W. B. Cheadle* (7th ed., 1867). It should be remembered that the older of the above books refer to conditions which have largely passed away 'New Lights on the Early History of the Great Northwest' is a recently published book, giving the MS journals of Alex. Henry and David Thomson (1799-1814), edited by *Prof. Elliott Coues* — For works on the Canadian Rockies by *Outram*, *Stutfield & Collie*, and *Wilcox*, see p. 259, and for works on the Selkirk Mts by *Wheeler* and *Green*, see p. 275. — The following recent French works may be noted: 'Le Canada; les deux races', by *André Siegfried* (1906); 'La Colonisation de la Nouvelle-France', by *Emile Salomé* (1906); 'Au Canada et chez les Peaux-Rouges', by *George Demanche* (1905); and 'Paysages Canadiens', by *Valbert Chevillard* (1891).

A good short geographical account of Canada is given by *Dr. George M. Dawson* in the 'Geography of the British Colonies' in 'MacMillan's Geographical Series' (1892). See also Part II of 'North America', by *S. E. Dawson*, in 'Stanford's Compendium of Geography and Travel' (new edition, 1899), 'Historical Geography of the British Colonies' (Vol. V., 'Canada'), by *C. C. Lucas* (1901), and 'Descriptive Sketch of the Physical Geography and Geology of Canada', by *A. R. C. Selwyn* and *G. M. Dawson* (1884).

A work that is almost indispensable to the intelligent visitor to Canada is the excellent 'Statistical Year-Book of Canada', now prepared by *Mr. A. Blue*, Chief Census Officer of the Department of Agriculture, and issued annually. — The 'Reports' of the *Geological Survey* (list of publications supplied on application) and of the *Department of the Interior* also contain a great deal of matter of interest for the traveller, including accounts of exploration in wild and unvisited districts — Accounts of the resources of the country are given in the 'Handbook of Canada', edited by *Professors Wright and Mavor* for the meeting of the British Association at Toronto in 1897, in 'Progress of Canada in the Century', by *J. Castell Hopkins* (1902), in 'Canada's Resources and Possibilities', by *J. Stephen Jeans* (1904), in 'Canada: the New Nation', by *H. R. Whates* (1906), and in *Professor James Mavor's* 'Report to the Board of Trade on the North-West of Canada' (with interesting maps; 1904). — 'Canada, an Encyclopædia of the Country', edited by *J. C. Hopkins* (6 vols.; 1898-99). — Reports on Altitudes in Canada can be obtained from the Department of the Interior.

Those interested in geological phenomena should be provided with 'An American Geological Railway Guide', by *James MacFarlane* (2nd ed., New York, 1890), in which the geological formation at every railway-station is given, with notes on specially interesting features. — Other useful books of reference are the 'Canadian Almanac' and the 'Commercial Handbook of Canada'.

Maps. The leading *General Maps* of the Dominion are the 'Map of the Dominion of Canada' (35, 58, & 100 M. per inch), published by the Department of the Interior, the 'Railway Map of Canada', published by the Department of Railways & Canals; and the 'Geological Map of Canada', issued by the Department of the Geological Survey. These maps can be procured by application to the Departments at Ottawa; and the last can also be obtained through a bookseller.

The best maps of the *Provinces* are a 'Map of the Province of Ontario' (6 M. per inch), issued by the Post Office Department, Ottawa; 'Quebec, with outline indications of adjacent provinces and states' (17½ M. per inch), issued by the Department of Lands, Mines, & Fisheries, Quebec; 'MacKinlay's Map of Nova Scotia' (7½ M. per inch), published by *A. W. MacKinlay*, Halifax; 'Map of Prince Edward Island' (2½ M. per inch), published by *G. Ballingall*, Charlottetown; 'Loggie's Map of New Brunswick' (4 M. per inch), published by *J. & A. McMillan*, St John; 'Map of

Manitoba, Alberta, & Saskatchewan (12½ M per inch), published by the Department of the Interior, Ottawa, 'Map of British Columbia' (20 M per inch), issued by the Department of Lands and Works, Victoria; 'Map of Yukon' (12 M. per inch), published by the Department of the Interior, Ottawa

Detailed Maps of various parts of the country on larger scales are published by the Department of the Interior and the Geological Survey, Ottawa, and by the Crown Lands Departments of the Provinces. These maps can be obtained only by application to the respective Departments, except those of the Geological Survey, which may also be procured through booksellers.

Admiralty Charts of the Atlantic and Pacific Coasts, of the Gulf and River St. Lawrence, and of the Great Lakes may be had from the Admiralty or from the agents at Halifax, Quebec, Toronto, and Victoria.

Charts of the Great Lakes, showing the Canadian coasts, are published by the Corps of Engineers, United States Army, and may be had from the Chief of Engineers, Washington.

I. APPROACHES TO CANADA.

Route	Page
1 The Trans-Atlantic Voyage	2
a. From Liverpool to Quebec and Montreal	2
b. From Liverpool to Halifax	4
c. From Glasgow to Quebec and Montreal	5
d. From Glasgow to Halifax and Portland	5
e. From Antwerp to Quebec and Montreal	5
f. From Liverpool to New York	5
g. From Liverpool to Boston	6
h. From Southampton to New York viâ Cherbourg.	6
i. From Hamburg to New York	7
j. From Bremen to New York	7
k. From Havre to New York	8
l. From Antwerp to New York viâ Dover	8
m. From Rotterdam to New York	8
n. From Glasgow to New York	8
o. From Copenhagen, Christiania, and Christiansand to New York	9
p. From Genoa and Naples to New York	9
2. From New York to Montreal	9
a. Viâ Albany (or Troy), Saratoga, and Lake Champlain	9
b. Viâ Troy, Rutland, and Burlington	14
c. Viâ the Connecticut Valley	15
d. Viâ Utica and the Adirondacks	16
3. From Boston to Montreal	17
a. Viâ Rutland and Burlington	17
b. Viâ Lowell and Concord	17
c. Viâ Concord, Plymouth, Wells River, and Newport From Newport to Magog, 18 From Farnham to Chambly and Montreal, 19.	18
d. Viâ Portsmouth and North Conway	19
4. From New York to Quebec viâ Springfield	20
5. From Boston to Quebec	21
6. From New York to Toronto	21
7. From Boston to the Maritime Provinces by Sea	22
a. From Boston to Eastport and St. John	22
b. From Boston to Yarmouth	23
c. From Boston to Halifax	23
8. From Boston to St. John by Railway	24
From McAdam Junction to Woodstock, 25; to St. Stephen and St. Andrews, 25.	
9. From Portland to Montreal and Quebec	25
a. Viâ the Grand Trunk Railway	25
b. Viâ the Maine Central Railroad	26

1. The Trans-Atlantic Voyage.

The following short account of the chief oceanic routes used by European visitors to Canada may be of service. For general hints as to the voyage, see p. xii. An interesting account of the Atlantic steamship-service is given in 'The Atlantic Ferry', by *Arthur J. Maginnis* (3rd ed., 1900). Many steamers on the principal lines are now equipped with wireless telegraphic apparatus, allowing communication either with shore-stations or with passing vessels.

The following list of the colours of the funnels ('smoke-stacks') of the principal steamship-lines will help the traveller to identify the steamers he meets. *Allan*, red, with white band and black top; *American*, black, with white band, *Anchor*, black (English flag), *Atlantic Transport*, red, with black top; *Canadian Pacific Railway*, buff; *Compagnie Générale Transatlantique*, red, with black top (French flag), *Cunard*, red, with black top and three narrow black bands, *Dominion*, red, with white band and black top; *Hamburg*, buff or black (German flag), *Holland-America*, black, with green and white bands, *Italian*, black, with central white band, *Leyland*, red, with black top, *North German Lloyd*, buff; *Red Star*, black, with white band; *Scandinavian*, black, red, and black; *White Star*, salmon, with black top.

The 'day's run' of the steamer, given in nautical miles (7 'knots' = about 8 Engl. M.), is usually posted up every day at noon in the companion-way. The traveller should remember that his watch will gain $1\frac{1}{2}$ - $\frac{3}{4}$ hr. daily in going W. and lose the same amount in going E.

a. From Liverpool to Quebec and Montreal.

This is the direct ocean-route from England to Canada and is that followed by the *Allan*, *Dominion*, and *Canadian Pacific Railway's Atlantic* lines from the middle of April to the middle of November. Fare from about \$65, second cabin from \$40. Quebec is 2635 nautical miles from Liverpool and is reached in 7-9 days; Montreal, 140 knots farther up the St. Lawrence, is reached in 10-12 hrs. more. The usual time on the Atlantic between Ireland and Belle Isle is 4-5 days. The turbine steamer 'Victorian', of the Allan Line, has made the passage from Moville to Quebec in 5½ days, while the C. P. R. 'Empress of Ireland' has reached Montreal from Liverpool in 6¼ days. Steerage passengers are landed at Quebec, but first and second cabin passengers have often the option of travelling thence to Montreal by special train or (recommended) of continuing the voyage up the beautiful St. Lawrence. In fine summer weather this is probably the most satisfactory approach to Canada from Europe. Quebec time is 4 hrs. 45 min. and Montreal time is 4 hrs. 55 min. behind that of Liverpool.

Liverpool, see *Baedeker's Great Britain*. Passengers usually board the Atlantic steamers from the Landing Stage. As we pass down the wide estuary of the *Mersey* we see the crowded docks of Liverpool to the right, while to the left lies *New Brighton*, with its pier, fort, and lighthouse. The mouth of the river is marked by a lightship, which we reach in about 2 hrs. after starting. On leaving the *Mersey*, the steamer turns to the right (N.W.), passes to the S. of the *Calf of Man* (seen to the right), comes in sight of the coast of *Down* (Ireland) in about 9 hrs., passes through *St. Patrick's Channel* (between Ireland and Scotland), and skirts the N. coast of Ireland,

affording a view of the *Island of Rathlin* (left). [Sometimes, on a clear day, the steamer passes between Rathlin and the mainland, affording a distant view (1.) of the *Giant's Causeway*] Some steamers ascend *Lough Foyle* to (190 knots from Liverpool) *Moiville*, the port of *Londonderry*, where mail and extra-passengers are taken on board. On issuing from *Lough Foyle*, the steamer steers at first to the W. and then, after passing *Malin Head*, the northernmost point of Ireland, to the S.W. The last part of Ireland seen is usually *Tory Island* (lighthouse) or the island of *Arranmore*, off the coast of *Donegal*. The general course followed across the Atlantic is considerably to the N. of that of the New York boats, lying (roughly speaking) between the parallels of 52° and 56° N. lat. The first land seen in the New World is the small island of *Belle Isle*, lying at the mouth of the *Gulf of St. Lawrence*.†

We then thread the *Straits of Belle Isle*, 12-20 M. wide, lying between the forbidding coast of *Labrador* (see p. 117) on the right and the island of *Newfoundland* (see p. 102) on the left. After we leave the Straits, the Gulf rapidly expands, but in clear weather land is almost continuously visible to the N. as far as *Cape Whittle* (see below). Beyond *Bradore Bay* the N. coast of the Gulf belongs to the *Province of Quebec* (p. 148). Numerous fine salmon-streams flow into the Gulf all the way from *Belle Isle* to the *Saguenay*, and many small fishing-stations may be seen along the shore. To the right, about 160 M. from *Belle Isle*, rises *Cape Mekattina*, a bold headland. At *Cape Whittle*, 80 M. farther on, our course bends from S.W. to nearly W. The steamer is now out of sight of land for about 75 M., until *Heath Point*, at the E. end of the island of *Anticosti*, is seen ahead.

Anticosti, dividing the St Lawrence Gulf into two channels, lies at a distance of 25-70 M. from the coast of Quebec. It is 140 M. long and 10-30 M. wide. The Dominion Government maintains important signal-stations here, and it also bears four lighthouses. The island was purchased in 1895 by Mr. Menier, the chocolate-manufacturer of Paris, who has expended large sums of money in developing the fisheries and agriculture. His experiments have proved that the soil and climate compare very favourably with the mainland. The fisheries (cod, herring, lobster, and halibut) are very rich. There are three fair harbours, at *Ellis Bay* (where Mr Menier has constructed a breakwater nearly a mile long), *Fox Bay*, for small craft (with a lobster-cannery), and *South West Point*. The island is well timbered, and there is a good water-power. The stationary population (almost wholly French-Canadian) is about 700, but numbers of workmen come every summer to work at the fisheries and clearing of the land. There are two villages, *Base Ste. Claire* (or *English Bay*) and *Strawberry Cove*. Mr. Menier's villa is at *Ellis Bay*. Salmon abound in all the rivers. Mr. Menier has stocked the island with moose, red deer, and other wild animals, and considerable quantities of bear, fox, and martin fur are annually obtained. Comp 'Monographie de l'île d'Anticosti', by *Joseph Schmitt* (Paris, 1904).

† In May and June the steamers enter the Gulf of St. Lawrence round the S. side of Newfoundland.

Natashquan, 80 M. from Cape Whittle, lies to the right, at the mouth of the river of the same name, one of the largest on the coast, and celebrated for its salmon.

The steamer passes to the S. of Anticosti, between it and the *Peninsula of Gaspé* (p. 90). Beyond Anticosti the land on both sides, which again fades out of sight for a time, belongs to Quebec. To the left (S.) is *Cape Magdalen*, at the mouth of the *Magdalen River*. To the right lie *Moisie* and the picturesque *Bay of Seven Islands*, celebrated in a ballad of Whittier. On *Egg Island* (right) Admiral Walker's fleet was wrecked in 1711, 800 men losing their lives (see p. 147). Our course again lies nearly due S. — The *St. Anne Mts*, culminating in *Mt. Bayfield* (3973 ft.), are seen to the left as we near the mouth of the St. Lawrence.

We leave the Gulf and enter the noble **St. Lawrence River** (see p. 227) between *Cape Chat* on the left and the low *Pointe de Monte* (lighthouse) on the right, about 580 M. from Belle Isle and 130 M. from the W. end of Anticosti. The river is here 32 M. wide. About 25 M. farther on, to the left, rise the *Paps of Matane*. The village of *Matane* lies at the mouth of the *Matane River*. The steamers not carrying mails take on the pilot at *Father Point* (p. 93), while the mail-steamers take the pilot on board and land the mails and passengers for the Maritime Provinces at *Rimouski* (see p. 93), 80 M. from the mouth of the river, here 30 M. wide. About 10 M. beyond *Rimouski* are the little village of *Bic* (p. 94) and *Bic Island*. The outline of the S. shore here is picturesque. Farther on are *Trois Pistoles* (p. 94) and the *Rosade Isles* *Green Island*, 6½ M. long, lies just below *Cacouna* (p. 168). Nearly opposite, on the N. shore, is the mouth of the *Saguenay* (p. 170). From this point to (130 Engl. M.) *Quebec* and (310 M.) *Montreal*, see RR. 33, 29.

b. From Liverpool to Halifax.

This is the winter-route of the Allan, C. P. R., and Dominion Steamship Lines. The Furness Line plies fortnightly between Halifax and Liverpool, calling at St. John's, Newfoundland (comp. p. 102) and fortnightly between London and Halifax. The distance from Liverpool to Halifax is 2480 knots (time 7-8 days). Halifax time is 4 hrs. 10 min. behind that of Liverpool. From Halifax the Dominion steamers go on to *Portland* (p. 24), the Allan boats to *St. John* (p. 27). Some of the Allan steamers ply direct to Portland.

From Liverpool to *Tory Island*, see pp. 2, 3. The course across the Atlantic is more southerly than that above described, the first American land seen being *Cape Race*, the S.E. extremity of Newfoundland, in 46° 40' N. lat. Thence we steer to the W.S.W. to (460 knots) *Halifax* (p. 50), on the E. coast of *Nova Scotia*. The mails are put on shore here, and also those passengers who wish to continue their journey by rail (special train to Montreal and points in the W. of Canada and the United States).

c. From Glasgow to Quebec and Montreal.

This route is followed by some steamers of the *Allan Line* (see p. 2). The distance from Glasgow to Quebec is 2570 knots, the time taken 10-11 days. Passengers may join the steamer at Glasgow or *Greenock*. The difference of time between Glasgow and Montreal is $4\frac{3}{4}$ hrs.

Glasgow and the beautiful voyage down the *Firth of Clyde* are described in *Baedeker's Great Britain*. On leaving the estuary of the river, we round the *Mull of Cantyre* (right) and proceed to the W., along the N. coast of Ireland. Thence to *Montreal*, see R. 1a.

d. From Glasgow to Halifax and Portland.

The Glasgow steamers of the *Allan Line* follow this route in winter. Distance to Halifax 2435 knots (9 days), to Portland 2895 knots (10 days). Portland time is 5 hrs. behind Glasgow time.

From Glasgow to *Tory Island*, see RR. 1c and 1a; thence to *Halifax* and *Portland*, see R. 1b.

e. From Antwerp to Quebec and Montreal.

This route is used by some of the steamers of the *Canadian Pacific Railway's Service* (comp. p. 2). The distance to Quebec is 3146 knots, the time taken 11 days. Fare \$50. The steamers go on to Montreal after landing third-class passengers at Quebec. The difference of time between Antwerp and Montreal is 5 hrs.

Antwerp, see *Baedeker's Belgium and Holland*. The first part of the voyage is similar to that of R. 11, the latter part to that of R. 1a.

f. From Liverpool to New York.

This is the route followed by the *Cunard* and *White Star* steamship companies. The fastest steamers take about 6 days from port to port (comp. p. xiii), the slowest 8-9 days. The distance varies from 3000 to 3100 nautical miles (ca. 3400-3550 Engl. M.), according to the course followed. New York time is 4 hrs. 48 min. behind that of Liverpool. The records for the fastest passages between Queenstown and New York are held at present by the Cunard steamer '*Lucania*' (eastward passage in 5 days, 8 hrs., 37 min.; westward passage, 5 days, 7 hrs., 23 min.). Fare from \$75. The new Cunard steamers '*Lusitania*' and '*Mauretania*', with turbine engines and four screws, are the largest vessels afloat (790 ft. long and 88 ft. wide, displacement 45,000 tons; 70,000 horse-power). It is expected that they will materially reduce the time of passage. For greater details of the routes to American ports, see *Baedeker's United States*.

From Liverpool to the mouth of the *Mersey*, see R. 1a. Farther on, in clear weather, we see the Welsh coast to the left (S.), where the *Little* and *Great Orme's Heads* are the most prominent points, backed by the distant *Snowdon Group*. A little later we skirt the N. coast of the *Isle of Anglesey*, then turn to the left, and steer to the S.W. through *St. George's Channel*, soon losing sight of land. The *Skerries*, with a lighthouse, lie off the N.W. point of Anglesey.

The first part of the Irish coast sighted is usually *Carnsore Point*, in *Wexford*, the S.E. corner of the island, off which lies the *Tuskar Rock Lighthouse*. In about 12-15 hrs. after leaving Liverpool we enter

the beautiful inner harbour of *Queenstown* (about 250 Engl. M. from Liverpool), where a halt is made to take on board the mails and additional passengers.

On leaving *Queenstown*, we skirt the S. coast of Ireland for some distance, passing several bold rocky headlands. The last piece of European land seen is usually the *Fastnet Rock* (lighthouse), off *Cape Clear Island*, 60 M. to the S.W. of *Queenstown*, or, in clear weather, *Dursey Island*, with the adjacent *Bull Rock Lighthouse*.

In crossing the Atlantic Ocean from E. to W., the steamer descends through about 11 degrees of latitude (*Queenstown* 51° 50' N. lat., *New York* 40° 42' 43"). The course varies somewhat according to the season of the year and from other causes. The summer route crosses the *Banks of Newfoundland* (see p. 113). The first American land sighted is usually either *Fire Island* or the *Navesink Highlands*, each with a lighthouse; but before either of these we see the *Nantucket Lightship* (192 M. from the *Sandy Hook Lightship*), which communicates by the Marconi wireless system with *Siasconset* and reports incoming vessels. About 3 hrs. after sighting land we approach *Sandy Hook Bar* and enter the *Lower Bay of New York*.

The voyage thence to *New York*, through the *Narrows*, past the *Quarantine Station*, and up the beautiful **New York Harbour* (with the colossal *Statue of Liberty*, etc.), is described in *Baedeker's United States*. Custom-house formalities, comp. p. xii.

g. From Liverpool to Boston.

This route is followed by weekly steamers of the *White Star Line* and the *Cunard Steamship Co* (2875-2975 knots, in 7-10 days). The weekly cattle-steamers of the *Leyland Line* also carry a limited number of first-class passengers in comfortable quarters and at moderate rates (ca. 10 days). Fare from \$55. Boston time is 11 minutes ahead of that of New York.

The route is substantially the same as that to New York (R. 1f). *Boston*, see p. 17.

h. From Southampton to New York via Cherbourg.

This is the route followed by the *American Line* (*International Mercantile Marine Co.*), sailing under the American flag. The distance from Southampton to New York is 3075 knots, and the usual duration of the voyage is 6½-7½ days. Passengers are conveyed by special train (10 a.m. on Sat.) from London to Southampton (1¾ hr.), where they embark directly from the wharf. The steamers then proceed to Cherbourg, to meet passengers from Paris (special train at 9.20 a.m.; 6¼ hrs.), and leave this port at 5 p.m. Fares from \$75, second cabin from \$47.50. Southampton time is 4 hrs 54 min. ahead of that of New York.

Southampton, see *Baedeker's Great Britain*. The steamer descends *Southampton Water* and passes through the *Solent*, affording a good view of the *Needles* to the left (lighthouse; red flashing light). The time of the voyage is reckoned from this point. To the right is *St. Alban's Head*. The steamer then crosses to *Cherbourg* (see

Baedeker's Northern France) and after leaving that port proceeds to the W. through the English Channel. *Start Point* (white flashing light) and *Eddystone Lighthouse* (one fixed and one flashing light), in *Plymouth Bay*, are seen to the right. The last point seen of the English mainland is *Lizard Head*, in Cornwall, and the last European land sighted is the *Scilly Isles* (lighthouse), about 30 M. to the S.W. of the Land's End. — The rest of the voyage is similar to that described in R. 1f.

i. From Hamburg to New York.

The EXPRESS STEAMERS of the *Hamburg-American Line* ply to New York via Southampton and Cherbourg (7½-8 days, from Southampton to Cherbourg, 78 M., in 5 hrs; from Cherbourg to New York, 3027 M., in 6½-7 days), and the MAIL STEAMERS run to New York direct (3505 knots, in 10-11 days). Fare from London from \$ 70, second cabin from \$ 50.

The Express Steamers start from *Cuxhaven*, at the mouth of the Elbe, 58 M from Hamburg, to which passengers are forwarded by special train, while the other boats start from Hamburg itself (wharf at the Grosse Grasbrook; see *Baedeker's Northern Germany*). At Cuxhaven, Southampton, and Cherbourg passengers embark by tenders. Passengers are carried between London and Southampton and between Paris and Cherbourg free of charge, by special trains. New York time is 4 hrs. 54 min. behind that of Southampton and 5 hrs 35 min behind that of Hamburg.

The Hamburg-American Co. has also a regular line of emigrant-steamers (Hansa Line) from Hamburg and Antwerp to Canada. Emigrants from Great Britain join the steamer at Antwerp.

On the SS. 'Amerika' and 'Kaiserin Auguste Victoria' the passengers may be booked on the 'European plan', receiving a rebate of \$ 15-25 from the regular fare and paying for their meals in 'Ritz's Carlton Restaurant' (B. or L. 75 c., D. \$ 1).

Leaving *Cuxhaven*, the steamer steers to the N.W., passing the three *Elbe Lightships* and affording a distant view of the red rocks of *Heligoland* to the right. Various other German, Dutch, and Belgian lights are visible. The first English lights are those of the *Gallopier Lightship* and the *Goodwin Sands*, while the first part of the coast to come in sight is usually near *Dover*. Farther on we pass through the *Straits of Dover*, with the English and French coasts visible to the right and left. The steamer of the direct service keeps on her way through mid-channel, while the express-steamer hugs the English coast, passes between the *Isle of Wight* and the mainland (with *Portsmouth* to the right), and enters *Southampton Water* (430 knots), where it generally anchors off *Calshot Castle*, to receive the British mails and passengers from *Southampton* (see *Baedeker's Great Britain*). It next proceeds to *Cherbourg* (see *Baedeker's Northern France*), to take on additional passengers and mails. The remainder of the route to New York is similar to that of R. 1h.

j. From Bremen to New York.

The EXPRESS STEAMERS of the *North German Lloyd* (*Norddeutscher Lloyd*) run to New York (3560 M., in 6½-7 days) via *Southampton* and *Cherbourg*, while the slower boats, calling alternately at Southampton and Cherbourg, take about 10 days. The steamers start from (40 M.) *Bremer-*

haven, at the mouth of the *Weser*, to which passengers are forwarded by special train. See *Baedeker's Northern Germany*. The 'Kaiser Wilhelm der Zweite' of this line holds the record for the quickest passage from Cherbourg to New York (5 days, 12 hrs., 25 min.) and vice versa (5 days, 8 hrs., 20 min.). New York time is $5\frac{1}{2}$ hrs. behind that of Bremen.

On leaving the mouth of the *Weser*, the steamer steers to the N.W., with the *Jahdebusen* opening to the left. Farther on it passes the *East Frisian Islands*. The rest of the voyage is similar to that described in R. 1 h. *Southampton* is 460 M. from Bremerhaven.

k From Havre to New York.

This route is followed by the French steamers of the *Compagnie Générale Transatlantique*. The distance is 3100 knots and the average time $6-7\frac{1}{2}$ days. New York time is 5 hrs. behind that of Havre.

Havre, see *Baedeker's Northern France*. The steamer steers out into the *English Channel*, affording distant views of *Cape La Hague* and the *Channel Islands* to the left, and of the *Scilly Isles* to the right. The farther course of the voyage resembles that of the German steamers described in RR. 1 i, 1 j.

l. From Antwerp to New York viâ Dover.

This is the route of the *Red Star Line* (3340-3410 knots, in 8 days). The steamers sail every Sat. and call at Dover. Fare from \$ 65, second cabin from \$ 45. New York time is $5\frac{1}{4}$ hrs. behind that of Antwerp.

Antwerp, see *Baedeker's Belgium and Holland*. The steamer descends the *West Scheldt*, with the Dutch province of *Zeeland* on either side, passes *Flushing*, on the island of *Walcheren* (right), and enters the *North Sea*. In very clear weather the towers of *Bruges* and *Ostend* may sometimes be distinguished to the left farther on. Several lightships are passed, and the first English land sighted is the high chalk cliffs of the *South Foreland*. The course after the call at *Dover* (see *Baedeker's Great Britain*) is similar to that of the German steamers (see RR. 1 i, 1 j).

m. From Rotterdam to New York.

This is the route of the *Holland-America Line*, sailing under the Dutch flag (3280 knots, in 8-10 days). At low water the steamers start from the *Hook of Holland*. They call at *Boulogne*. Fare from \$ 65, second cabin from \$ 45.

Rotterdam, see *Baedeker's Belgium and Holland*. The steamer descends the picturesque *Maas* for 2 hrs. and then crosses the *North Sea* to (10-12 hrs.) *Boulogne* (see *Baedeker's Northern France*). The rest of the voyage is similar to that of R. 1 h.

n. From Glasgow to New York.

This is the route of the *Anchor Line* and of some boats of the *Allan Line* (2920 knots, in $7\frac{1}{2}$ -9 days, from *Moville*, 2820 knots, in 7-8 days). Passengers may join the steamer at Glasgow, *Greenock*, or *Moville*. Fares \$ 55-125, second cabin \$ $37\frac{1}{2}$ - $47\frac{1}{2}$. The difference of time between Glasgow and New York is $4\frac{3}{4}$ hrs. Some of the *Allan Line* steamers run to Boston.

From Glasgow to *Tory Island*, see R. 1 c. The general course followed by the Glasgow steamers is considerably to the N. of that of the Liverpool boats, not joining the latter before the *Banks of Newfoundland* (p. 113).

o. From Copenhagen, Christiania, and Christiansand to New York.

The steamers of the *Scandinavian-American Line* ply from Copenhagen to New York (3705 knots) in about 11 days, calling at (275 knot-) Christiania one day and at (165 knot-) Christiansand two days after starting. New York time is 5½ hrs. behind that of Copenhagen and Christiania.

Copenhagen, see *Baedeker's Norway, Sweden, and Denmark*. The steamer steers up the *Cattegat*, with Denmark on the left and Sweden on the right. At *Christiania* (see *Baedeker's Norway*), at the head of the picturesque *Christiania Fjord*, it embarks passengers from Drontheim, Stockholm, Gothenburg, etc. It then retraces its course through the fjord and follows the coast of Norway to *Christiansand*, where it is joined by passengers from Stavanger, Bergen, and the W. coast of Norway. Leaving Christiansand, the steamer steers to the W., round the N. coast of Scotland, passing through the *Peniland Firth* and within sight of the *Orkney Islands*. Farther on it turns to the S.W. and eventually joins the route described in R. 1 a, off the Banks of Newfoundland.

p From Genoa and Naples to New York.

The *Italian Royal Mail Steamship Co.* (*Navigazione Generale Italiana*) maintains, in conjunction with the steamers of *La Veloce* (*Navigazione Italiana a Vapore*), a weekly service on this route, while some of the other great lines also despatch steamers to Italian ports at more or less regular intervals. The distance from Genoa to New York is 4500 knots (13 days), from Naples to New York 4150 knots (12 days). New York time is 6 hrs. behind that of Italy.

For the Italian ports, see *Baedeker's Italian Handbooks*. Leaving *Genoa*, the steamers steer to the S., along the coast of Italy, to *Naples*. They then turn towards the W., pass to the S. of Sardinia, and proceed through the Mediterranean Sea to *Gibraltar*. Beyond the straits, their course across the Atlantic to New York is slightly to the N. of W. They pass within sight of the *Azores*.

2. From New York to Montreal.

a. Viâ Albany (or Troy), Saratoga, and Lake Champlain.

384 M. NEW YORK CENTRAL & HUDSON RIVER RAILROAD to (143 M.) *Albany* in 2¾-4 hrs.; DELAWARE & HUDSON RAILROAD thence to (191 M.) *Rouse's Point* in 6-6¾ hrs.; GRAND TRUNK RAILWAY thence to (50 M.) *Montreal* in 1½ hr. (through-express in 10¾-12¼ hrs.; through-fare \$ 10 65, parlor-car \$2, sleeper \$2; best views to the left as far as Albany, then to the right). Luggage checked through to Montreal is examined by the custom-house officers on arrival. — This is the shortest and most direct route from New York to Montreal. Those who have not seen the Hudson should go by STEAMER to Albany

The United States portions of this and the following routes are given in the merest outline, and the reader is referred for greater detail to *Baedeker's United States*.

New York. — **Hotels.** Below 14th St *Lafayette-Brevoort House*, R. from \$2; *Aslor House*, R. from \$1½; *Broadway Central*, from \$2½, R. from \$1, *St. Denis*, R. from \$1; *Lafayette* (French), R. from \$1, etc. — From 14th St to 26th St. (incl Union Sq. and Madison Sq) *Fifth Avenue Hotel*, from \$5, R. from \$2; *Hoffmann House*, R. from \$2, *Everett House*, R. from \$1½; *New Amsterdam*, R. from \$1; *Westminster*, from \$3½, R. from \$1; *Abemarie*, R. from \$2, etc. — Above Madison Square: *Waldorf-Astoria*, R. from \$2½; *Holland House*, R. from \$2, *St. Regis*, R. with bath from \$5, *Knickerbocker*, R. with bath from \$2½, *Hotel Gotham*, R. with bath from \$4; *Belmont*, close to Grand Central Station, R. from \$2, with bath from \$3, *Hotel Astor*, R. from \$2½, with bath from \$3½; *Savoy*, from \$5, R. from \$2; *Netherland*, R. from \$2; *Plaza*, from \$5, R. from \$2; *Majestic*, R. from \$2½, *Buckingham*, R. from \$2, *Manhattan*, R. from \$2; *Imperial*, R. from \$2, *Murray Hill*, from \$4½, R. from \$1½; *Vendome*, R. from \$2; *Cadillac*, *Grand Union*, R. from \$1; *Park Avenue*, from \$3½, R. from \$1; *Mariborough*, \$3½, R. \$1½; and many others — *Boarding Houses* (\$8-30 per week) and *Furnished Lodgings* (\$4-15 per week) are easily procured.

Elevated Railroads. The four *Elevated Railroads* of New York traverse Second, Third, Sixth, and Ninth Avenues from end to end of Manhattan Island. The uniform fare for any distance is 5 c. (children under five free), and stations occur at frequent intervals. Trains run every few minutes during the day, and on Third, Sixth, and Ninth Avenues also during the night at intervals of 10 minutes.

Rapid Transit Railroad or New York Subway (*Interborough Rapid Transit Co.*, 13-21 Park Row) An important addition to the transit-facilities of the city is afforded by this underground electric railroad, opened in 1904. It is 2½ M. in total length, and extends from City Hall to (1½ M.) *Kingsbridge*, Spuyten Duyvil Creek, on the W. side of the city, and to (1½ M.) *Bronx Park* on the E. side. The uniform fare is 5 c. and there are frequent stations. Express trains to 96th St. in 13 min., local trains in 21 minutes.

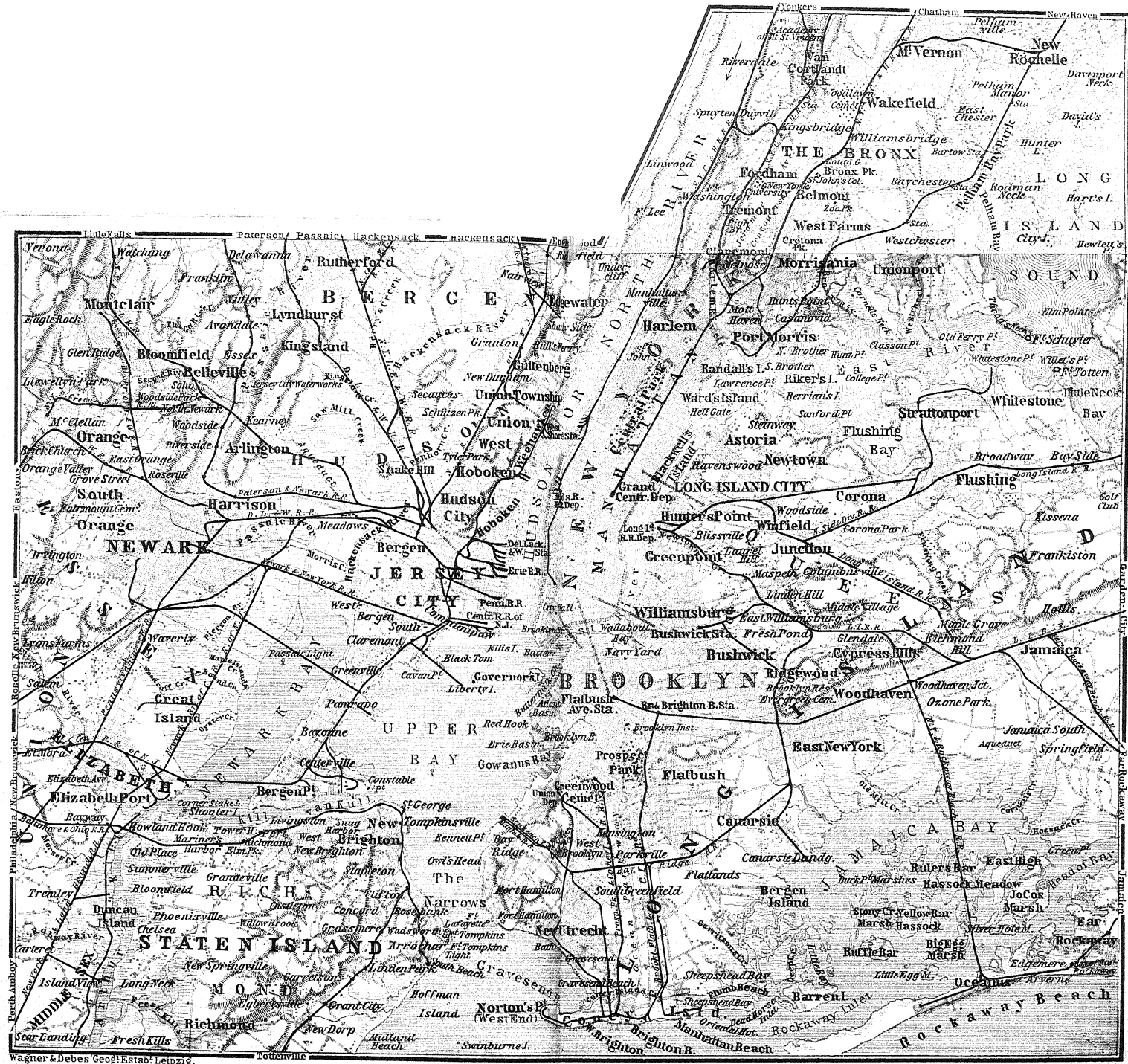
Tramways (mainly electric) traverse nearly all the avenues running N. and S. and most of the important cross-streets (uniform fare 5c.). The cars nominally stop only at the upper crossings going up, and at the lower crossings going down town. An omnibus ('stage'; fare 5 c.) runs from Bleecker St. up Fifth Ave. to 89th St.

Carriages. The cab-fares of New York are high. *Hackney Carriages* (1-4 pers.), usually with two horses, \$1 for the first mile and 50 c. for each ½ M. additional; per hr. \$1½, each additional ½ hr. 75 c.; waiting 40 c. per ¼ hr. *Cabs* and *Hansoms* (1-2 pers.), 50, 25, \$1, 50 c., 25 c. One trunk, not exceeding 50 lbs. in weight, free; extra luggage 25 c. per piece. Children under eight years of age free. — The Pennsylvania and the New York Central Railways have special cab-services at lower rates.

The **Excursion Boats, Automobiles, and Steam Yacht** of the 'Seeing New York' company afford an excellent method of making a first general acquaintance with the city. Particulars on application at the office, Fifth Ave. side of Flat-iron Building (p. 11).

Post Office, City Hall Park, open day and night, on Sun. 9-11 a.m.; also 35 *District Stations*, 180 *Sub-Stations* (in druggists' shops), and innumerable letter-boxes. — *Telegraph Messages* may be sent from all the chief hotels (to New York or Brooklyn 20 c. per 10 words, to other parts of the United States 25 c. \$1 per 10 words, to Ontario or Quebec 40 c. per 10 words, Nova Scotia or New Brunswick 50 c., Manitoba 75 c., Newfoundland \$1 10, British Columbia \$1-4; to England 25 c. per word).

Theatres. New York contains 40-50 theatres, among the chief of which are the *Metropolitan Opera House*, the *Academy of Music*, *Daly's*, *Madison*



0 1 2 3 4 5 6 7 8
Statute Miles 1 : 210,000 0 1 2 3 4 5 6 7 8
Kilometres

Square, New Amsterdam, Lyric, Majestic, Wallack's, New Lyceum, Broadway, Fifth Avenue, and Casino. The *Madison Square Garden* and the *Hippodrome* are also prominent places of amusement.

British Consul-General, Sir Percy Sanderson, C. M. G., 17 State St.

New York, the largest and wealthiest city of the New World, with $3\frac{1}{2}$ -4 million inhab. (3,437,400 at the census of 1900), is situated on New York Bay, in $40^{\circ} 42' 43''$ N. lat. and $74^{\circ} 0' 3''$ W. long. It now consists of the boroughs of *Manhattan, The Bronx, Brooklyn, Queens, and Richmond.* Manhattan or *New York* proper, with about 2,000,000 inhab., consists mainly of the long and narrow *Manhattan Island*, which is bounded by the *Hudson* or *North River* on the W. and the *East River* on the E., while it is separated from the mainland on the N. and N.E. by the *Harlem River* and *Spuyten Duyvil Creek*. The older and lower part of the city, devoted almost entirely to business, is irregularly laid out and contains many narrow streets; but above 13th St. the streets are wide and laid out at right angles to each other.

New York was founded by the Dutch in 1624 under the name of *New Amsterdam*, and passed into English possession 50 years later. Greater *New York*, as above described, was constituted in 1897.

The most important business-street of *New York* is **Broadway**, which runs from *Battery Park* (with *Aquarium*), at the S. end of *Manhattan Island*, to (5 M.) *Central Park* (p. 12). Among the chief buildings in or near it, enumerated from S. to N., are the large new **Custom House**, at its S. extremity; the huge *Produce Exchange* (right), the *Washington Building* (left); the *Exchange Court Building* (right), the *Manhattan Life Insurance Co.* (r.; *View from tower, 360 ft. high); *Empire Building* (left), **Trinity Church* (l.; 1839-46); the *Union Trust Co.* (r.); the *Equitable Life Insurance Co.* (r.; *View from the roof); *St. Paul's Church* (l.), *St. Paul Building* (l.), the **Post Office**, the **City Hall*, the **Court House**, the *Park Row Building* (30 stories; *View from towers, 387 ft. high), and several large *Newspaper Offices*, all in *City Hall Park* (to the right); and **Grace Church* (r.; cor. of 11th St.). At 14th St. *Broadway* reaches ***Union Square**, with its statues and fine shops; and at 23rd St. it reaches ***Madison Square**, also embellished with statues and surrounded by handsome hotels and other buildings, including the new ***Appellate Court House** (cor. of 25th St.), and the curious *Flat Iron Building*, at the point of junction of *Broadway* and *Fifth Avenue*. Farther on, *Broadway* passes numerous theatres and hotels and reaches *Longacre Square*, with the tall building (375 ft.) of the *New York Times*, beyond which it is somewhat uninteresting.

Among the streets diverging from *Broadway* are *WALL STREET*, the *Lombard Street* of *New York*, with the *Stock Exchange* (10-3), the *U S Sub-Treasury*, and the *Old Custom House*; *Liberty Street*, with the **New York Chamber of Commerce* building, erected in 1903; the busy *Fulton Street*; *Park Row*, at *City Hall Park*, leading to *Five Points* and the *Bowery*; *Astor Place* (r.), leading to the *Mercantile Library*, the **Astor Library*, and the *Cooper Union*; *FOURTEENTH STREET*, a busy shopping-resort, with *Tammany Hall*, and *TWENTY-THIRD STREET*, a more fashionable shopping-resort, containing

the substantial building of the *Young Men's Christian Association*. — At Park Row starts the famous *Brooklyn Suspension Bridge*, crossing the East River in one main span of 1600 ft. (total length, incl approaches, 5990 ft.), at a height of 135 ft above high water. It commands a splendid **View* of New York, Brooklyn, and the Harbour. [Farther up the East River are the *Williamsburg Bridge*, completed in 1904, and the unfinished *Manhattan Bridge* and *Blackwell's Island Bridge*, all three notable structures.]

**Fifth Avenue*, the chief street in New York from the standpoint of wealth and fashion, runs from *Washington Square* to (6 M.) the *Harlem River* (p. 13). Between 40th and 42nd Sts. is slowly rising the new building of the **New York Public Library*, which will be one of the greatest architectural monuments of the city. Above 42nd St. Fifth Avenue consists almost wholly of fine private houses, clubs, and churches, including the *Synagogue of Emanu-El*, the restaurants of *Delmonico* and *Sherry*, the *Dutch Reformed Church*, **St Patrick's Cathedral* (R. C.), the **Vanderbilt Mansions*, and the *Fifth Avenue Presbyterian Church*. At 59th St., where Fifth Avenue reaches Central Park (see below), is a fine **Statue of General Sherman*, by St. Gaudens. Between this point and 110th St. the avenue skirts the E. side of the park, passing, among other handsome buildings, the **Lenox Library*, with its valuable collections of rare books and MSS, pictures, and sculptures (adm. 9-6).

Other fine streets, running parallel with Fifth Avenue, are **Madison Avenue* and *Park Avenue*, the former vying with Fifth Avenue as a residence-street and the latter containing many handsome charitable and educational institutions. The *Tiffany House*, at the corner of Madison Ave. and 72nd St., is an interesting specimen of curious yet beautiful architecture.

**Central Park*, occupying the centre of Manhattan Island, covers 840 acres of ground and is very beautifully laid out. It is adorned with numerous monuments, the most important of which is **Cleopatra's Needle*, brought from Alexandria in 1877.

On the W. side of Central Park, between 77th and 81st Sts., stands the **American Museum of Natural History*, a large building containing highly interesting collections (adm. daily, 9-5; fee on Mon. & Tues. 25 c.).

The ***Metropolitan Museum of Art*, on the E. side of Central Park, opposite the 81st St. entrance and near Cleopatra's Needle (see above), should be visited by every traveller in New York (adm. daily, 10 to dusk; on Mon. and Frid. 25 c., at other times free; also on Mon. & Frid., 8-10 p.m., and on Sun. afternoon).

Among the chief features of the museum are the *Cesnola Collection of Cyprian Antiquities*, the *Ancient Pictures*, including good examples of Rembrandt, Van Dyck, Frans Hals, Velazquez, Rubens, Van der Meer, and Jacob van Ruysdael; the *Modern Paintings* of the French (Meissonier, Detaille, Corot, Rosa Bonheur, etc.), German, English, and American schools; the *Collection of Glass*; an *Etruscan Biga*; the *Boscotrecase Frescoes*; and the *Musical Instruments*.

The stately **Riverside Drive or Park*, extending from W. 71st St. to W. 127th St. (ca. 3 M.), commands splendid views of

the Hudson. Here, opposite 89th St., is the *Soldiers and Sailors Monument*, in the form of a small Greek circular temple of white marble. Near the N. end of the Drive is the sumptuous *Tomb of General Ulysses S. Grant*. — Not far off are *Morningside Heights*, with *St. Luke's Hospital* and **Columbia University*, one of the leading colleges of America. — At the corner of *Morningside Avenue* and 112th St. is the new *Episcopal Cathedral of St. John the Divine*, the building of which has not advanced very far.

The visitor to New York, with a few days to spend, will find many other objects of interest both in the city itself and in its environs (see *Baedeker's United States*).

The train starts from the *Grand Central Depot* (42nd St.), crosses the *Harlem River* (p 12), and runs to the W. to (11 M.) *Spuyten Duyvil*, beyond which it skirts the E. bank of the *Hudson* (*Views). 15 M. *Yonkers*; 25 M. *Tarrytown*; 31 M. *Ossining*, formerly *Sing Sing*, with the large New York State Prison, 41 M. *Peekskill*; 59 M. *Fishkill*; 74 M. *Poughkeepsie*, the seat of *Vassar College*; 115 M. *Hudson*. Opposite rise the *Catskills*. At (142 M.) *Rensselaer* we cross the *Hudson*.

143 M. *Albany* (**Ten Eyck*, *New Kenmore*, *Stanwix Hall*), the capital of New York State, with (1900) 94,150 inhab. and a handsome **Capitol*. — The train now follows the W. bank of the *Hudson* to (159 M.) *Mechanicville*, where we turn to the left (W.). — 180 M. *Saratoga Springs* (*United States*, *Grand Union*, *Congress Hall*, *Windsor*, *Kensington*, *Worden*, and many others), one of the most noted inland watering-places in the United States, with about 30 saline mineral springs (season, July and Aug.). — Beyond *Saratoga* the train runs to the N.E., crossing the *Hudson* again at (197 M.) *Fort Edward*, whence a railway runs to (14 M.) *Caldwell*, at the head of *Lake George*. — 219 M. *Whitehall*, at the S. extremity of **Lake Champlain*, the W. bank of which we now follow. 241 M. *Fort Ticonderoga*, the junction of a line to (5 M.) *Baldwin*, at the foot of *Lake George*, and the starting-point of the *Lake Champlain* steamers. At (259 M.) *Port Henry* the *Adirondack Mts.* are seen to the left. 270 M. *Westport*; 298 M. *Port Kent*, the junction of a line to the (2 M.) wonderful **Ausable Chasm*. — 306 M. *Hotel Champlain Station*, for the large and finely fitted-up Hotel (200 ft.; \$5) of that name, commandingly situated on *Bluff Point*, overlooking *Lake Champlain*.

309 M. *Plattsburg* (*Fouquet House*), a town of about 8500 inhab., on the W. shore of *Lake Champlain*, is a convenient point for excursions on that lake and is also one of the gateways to the *Adirondacks*. — Our line now leaves *Lake Champlain* and traverses a somewhat monotonous district. 319 M. *West Chazy* is the junction of an alternative route to *Montreal*.

At (334 M.) *Rouse's Point* (*Windsor*, \$2½-3), at the N. end of Lake Champlain, we enter the *Province of Québec* in the *Dominion of Canada* (custom-house examination of hand-baggage). We now run over the tracks of the Grand Trunk Railway, near the left bank of the *Richelieu*, the discharge of Lake Champlain. The country traversed is a flat alluvial plain.

357 M. *St. John's* (*St. John's, Windsor, Canada House*, \$2; *Rail. Restaurant*; U.S. Consul, *Mr. Chas. Deal*), on the *Richelieu*, is a quaint French-looking little town of (1901) 4030 inhab., with some manufactures and a local trade in grain, produce, and lumber. It was at one time of considerable importance as a fortified post commanding the line of approach by the Champlain Valley, and it was one of the chief bases of supply for the troops of Carleton and Burgoyne in the campaigns of 1776-7. The grass-grown fortifications, the old Colonial houses, and the large Lunatic Asylum contribute to its picturesqueness. — 364 M. *Lacadie*; 372 M. *Brosseau's*; 376 M. *Golf Links*, 378 M. *St. Lambert*, the junction of three lines of railway (G.T.R., Q S R., and C.V.R.). The train now crosses the *St. Lawrence* by the *Victoria Bridge* (see p. 137) and sweeps round to the left, passing the suburban stations of (381 M.) *Point St. Charles* and (382 M.) *St. Henri*.

384 M. *Montreal* (Bonaventure Station), see p. 125

b. *Viâ Troy, Rutland, and Burlington.*

397 M. NEW YORK CENTRAL & HUDSON RIVER RAILROAD to (149 M.) *Troy* in 4-5 hrs.; BOSTON & MAINE R. R. thence to (30 M.) *White Creek* in 1½ hr.; RUTLAND R. R. thence to (188 M.) *St. John's* in 6½ hrs.; CANADIAN PACIFIC RAILWAY thence to (30 M.) *Montreal* in ¾ hr (through-trains in 1½-2-13 hrs., fares, etc., see p. 9).

From *New York* to (142 M.) *Rensselaer*, see R. 2 a.

149 M. *Troy* (*Fifth Avenue*, \$2½-3; *Mansion Ho.*, \$2-2½; *Windsor*, R. from \$1), a busy industrial city of (1900) 60,651 inhab., lies at the head of the steam-navigation of the Hudson, and is an important railway-centre.

Our train here turns to the right (N.E.) and runs over the *Boston & Maine R. R.* to (179 M.) *White Creek*. We then run towards the N., with the *Green Mts.* at some distance to the right. 202 M. *Manchester*, at the base of *Mt. Equinox* (3816 ft.); 234 M. *Rutland* (*Rail. Restaurant*), in the centre of the marble-quarries of *Vermont*. Farther on, views of the *Green Mts.* are obtained to the right. — 301 M. *Burlington* (*Van Ness House*, \$2-3), the chief city of *Vermont*, with (1900) 18,640 inhab. and an immense lumber-trade, is finely situated on the E. bank of *Lake Champlain*. The *University of Vermont* here is attended by 600 students.

To the N. of *Burlington* the line crosses the beautiful islands of Lake Champlain, with the aid of long embankments 314 M. *South Hero*, 318 M. *Grand Isle*; 326 M. *North Hero*. The line now returns

to the mainland. 332 M. *Isle La Motte*. At (336 M.) *Alburgh* hand-baggage is examined by the Canadian custom-house officers. A little farther on we enter *Quebec* and run along the E. bank of the *Richelieu* (p. 14). 344 M. *Noyan* is the junction of the Grand Trunk Railway to Ottawa and of the Quebec Southern Railway to St. Hyacinthe (see p. 141). 348 M. *Clarenceville* (U. S. Con. Agent). At (366 M.) *Iberville*, the junction of a line to Quebec (p. 141), we cross the *Richelieu* to (367 M.) *St. John's* (p. 14), where we join the Canadian Pacific Railway. — Hence to —

397 M. *Montreal* (Windsor Street Station), see pp. 47, 48.

c. Viâ the Connecticut Valley.

450 M. NEW YORK, NEW HAVEN, & HARTFORD RAILROAD to (136 M.) *Springfield* in $3\frac{1}{2}$ - $4\frac{1}{2}$ hrs.; CONNECTICUT & PASSUMPSIC DIVISION OF THE BOSTON & MAINE R. R. thence to (50 M.) *South Vernon* in $1\frac{1}{4}$ -2 hrs.; CENTRAL VERMONT R. R. thence to (10 M.) *Brattleboro* in $\frac{1}{3}$ hr.; CONNECTICUT RIVER DIVISION OF THE BOSTON & MAINE R. R. thence to (64 M.) *White River Junction* in $1\frac{3}{4}$ hr.; CENTRAL VERMONT R. R. thence to (163 M.) *St. John's* in 5-6 hrs.; GRAND TRUNK RAILWAY thence to (27 M.) *Montreal* in $\frac{3}{4}$ -1 hr (through-fare \$10 65; sleeper from Springfield \$2; express from New York to Montreal in $13\frac{1}{4}$ - $15\frac{1}{2}$ hrs.).

The train starts from the *Grand Central Depot* (p. 13), crosses the *Harlem*, and farther on runs to the N.E., skirting *Long Island Sound*. 28 M. *Greenwich*, in *Connecticut*; $33\frac{1}{2}$ M. *Stamford*; 56 M. *Bridgeport*. — 73 M. *New Haven* (*New Haven House*; *Rail. Restaurant*), a city of (1900) 108,027 inhab., is well known as the seat of *Yale University* (3000 students). — 110 M. *Hartford* (**Allyn House*; *Rail Restaurant*), the capital of *Connecticut*, with (1900) 79,850 inhab., has a handsome **Capitol* and other public buildings. — 136 M. *Springfield* (*Massasoit House*; *Worthy House*), an industrial city of *Massachusetts*, with (1900) 62,059 inhab., is best known for the rifles made in the *U. S. Armoury* here.

Our train now diverges to the left from the line to Boston and ascends the beautiful **Valley of the Connecticut* (views mainly to the right). 144 M. *Holyoke*, with large paper-mills; 153 M. *Northampton*, the seat of *Smith College* (for women; 1000 students) and other well-known educational establishments; 186 M. *South Vernon*; 196 M. *Brattleboro*. At (220 M.) *Bellows Falls* (*Rail. Restaurant*) we cross the *Connecticut*, recrossing it at (246 M.) *Windsor*. — 260 M. *White River Junction* (*Rail. Restaurant*) is the junction of an alternative route to *Montreal* viâ *Wells River* and *Newport* (see R. 3 c).

Our line (Central Vermont R. R.) ascends the picturesque **Valley of the White River*, which flows through the *Green Mts.* From (325 M.) *Montpelier Junction* a short branch-line runs to *Montpelier*, the capital of *Vermont*. — 335 M. *Waterbury* is a good centre for excursions among the *Green Mts.* (*Mt. Mansfield*, *Camel's Hump*, etc.). Farther on, *Lake Champlain* (p. 13) comes into sight on the left. — 357 M. *Essex Junction*; 381 M. *St. Albans* (*Rail. Restaurant*); 393 M.

Highgate Springs. A little farther on we enter *Quebec*. Beyond (405 M.) *Stanbridge* (U. S. Con. Agent) we see the *Rougemont* and *Beloeil Mts.* (p. 136) to the right, rising as isolated masses from a level plain. Crossing the wide *Richelieu* (¹Views to right and left) at (423 M.) *St. John's*, we join the route described at pp. 13, 14 (G. T. R.).

450 M. *Montreal* (Bonaventure Station), see p. 125.

d. *Viâ Utica and the Adirondacks.*

470 M. NEW YORK CENTRAL & HUDSON RIVER RAILROAD in 12½-15 hrs. (fares as in R. 2a). — This route crosses the Adirondacks and forms a convenient approach to many points in that district. Travellers may also approach *Montreal* during summer by steamer 'Paul Smith' from *Beauhar- nois*, descending the *St. Lawrence* through the *Coteau*, *Cedars*, *Spirit Rock*, *Cascade*, and *Lachine Rapids* (comp. R. 47).

From New York to (143 M.) *Albany*, see R. 2a. We now turn to the left (W.) and leave the *Hudson*. 146 M. *West Albany*; 160 M. *Schenectady*. We ascend the smiling **Mohawk Valley*. 176 M. *Amsterdam*; 217 M. *Little Falls*, in a romantic gorge, 224 M. *Herkimer*.

At (238 M.) *Utica* (*Butterfield*; *Rail. Restaurant*) our line diverges to the right from the *Buffalo* line and runs to the N.W., across the W. side of the *Adirondack Wilderness*. 255 M. *Trenton Falls* (Hotel *Trenton*, \$3), with a series of beautiful **Waterfalls*, having a total descent of 310 ft. 290 M. *Fulton Chain*, the junction of a branch-line to the *Fulton Lakes*, 295 M. *Clearwater*, the junction of the *Raquette Railway* for *Raquette Lake* and *Blue Mountain Lake*; 338 M. *Childwold*, 345½ M. *Tupper Lake Junction*, 1½ M. from *Tupper Lake Village* (*Altamont*, *Iroquois*, \$2), the terminus of the *New York & Ottawa R.R.* (p. 182); 360 M. *Saranac Inn Station*. From (363½ M.) *Lake Clear* a branch-line runs to (5 M.) *Saranac Lake* and (15 M.) *Lake Placid*. 368 M. *Paul Smith's*; 380 M. *Loon Lake*.

At (405 M.) *Malone* the train crosses the *Rutland R.R.* and continues to run towards the N. Beyond (413 M.) *Constable* we enter *Canada*. 419 M. *Athelstan*; 423 M. *Huntingdon*. At (435 M.) *Valley-field*, a busy little industrial town (11,055 inhab. in 1901), we reach the *St. Lawrence*, along the S. bank of which we now run to the right. 448 M. *Beauharnois* (see above); 456 M. *Chateauguay*, where the French Canadian militia under *De Salaberry* gained an important victory over the Americans in 1813 (battlefield marked by a monument erected in 1895). At (461 M.) *Adirondack Junction* we connect with the *Canadian Pacific Railway*.

470 M. *Montreal* (*Windsor Street Station*), see p. 125.

3. From Boston to Montreal

a. Viâ Rutland and Burlington.

330 M BOSTON & MAINE RAILROAD (FITCHBURG DIVISION) from Boston to (114 M) *Bellows Falls* in $3\frac{3}{4}$ -4 hrs.; RUTLAND RAILROAD thence to (186 M) *St. John's* in $5\frac{3}{4}$ -7 hrs., CANADIAN PACIFIC RAILWAY thence to (30 M) *Montreal* in $\frac{3}{4}$ 1 hr (through-fare \$9; parlor-car \$11½; sleeper \$2).

Boston (*Touraine, Somerset, Vendome, Brunswick, Parker House, Young's, Bellevue*, etc.), the capital of Massachusetts, the chief town of New England, and one of the oldest (1630) and most interesting cities in the United States, lies at the head of the beautiful **Massachusetts Bay*, about 200 M. to the N.E. of New York. Pop (1900) 560,892

Among the sights of Boston which even the most hurried traveller should take in are the *State House*, the *Old State House*, the *Old South Meeting House*, *Trinity Church*, the *Public Library*, the *Museum of Fine Arts*, the *Subway*, the *Shaw Monument*, and the *Common*. Those who have a little more time should include the handsome residence-quarters of the *Back Bay*, the new *Christian Science Temple* (1906), some of the picturesque suburbs, and the neighbouring city of *Cambridge*, with *Harvard University*, the oldest (1636), richest, and most famous of American seats of learning (6000 students). *Boston Harbour*, with its numerous islands, is also well worth seeing — For details, see *Baedeker's United States*

On leaving Boston, the train crosses the *Charles*, affording a view (right) of *Bunker Hill Monument*, commemorating the battle of June 17th, 1775. — 10 M. *Waltham*, with cotton-mills and a large watch-factory, 20 M. *Concord* (*Thoreau House*, Colonial, \$2½), sacred for its associations with Hawthorne, Emerson, and other men of letters, 50 M. *Fitchburg* (*Johnsonia*, from \$2½), on the *Nashua River*. Farther on, *Mt. Wachusett* (2103 ft.) rises to the S. Near (82 M) *Troy* (not to be confounded with the city mentioned at p. 14), *Mt. Monadnock* (3186 ft.) is seen to the right. 92 M. *Keene*.

From (114 M) *Bellows Falls* (p. 15) we run to the N.W. to (167 M.) *Rutland* (p. 14) and (23½ M) *Burlington* (p. 14) Hence to —

330 M *Montreal* (*Windsor Street Station*), see R. 2 b.

b. Viâ Lowell and Concord.

375 M BOSTON & MAINE RAILROAD to (145 M.) *White River Junction* in $4\frac{1}{4}$ - $4\frac{3}{4}$ hrs.; CENTRAL VERMONT RAILROAD thence to (163 M.) *St John's* in 5-6 hrs; and GRAND TRUNK RAILWAY thence to (27 M.) *Montreal* in $\frac{3}{4}$ -1 hr (fares, see above).

Boston, see above. We cross the *Charles* and run towards the N.W. 26 M. *Lowell* (*St. Charles, Richardson*, \$3), the fourth city of Massachusetts (pop. 94,969) and one of the chief industrial cities of America (woollen goods, carpets, etc.); 39 M. *Nashua* (*Tremont*, \$2-2½; Rail. Restaurant); 56 M. *Manchester* (*New Manchester House*, \$2½-3½; Rail. Restaurant), a cotton-making city (56,987 inhab.), 74 M. *Concord* (*Eagle*, \$2½-4½; Rail. Restaurant), the capital of *New Hampshire* (19,632 inhab.) and home of Mrs. Eddy

145 M. *White River Junction* (Rail. Restaurant), and thence to —
335 M. *Montreal* (*Bonaventure Station*), see R. 2 c.

c. *Viâ Concord, Plymouth, Wells River, and Newport.*

343 M. BOSTON & MAINE RAILROAD to (235 M.) *Newport* in 7½-8 hrs ; CANADIAN PACIFIC RAILWAY thence to (108 M.) *Montreal* in 3½-4½ hrs (fares, see p 17). — This route runs viâ *Lake Winnepesaukee* and also forms one of the approaches to the *White Mts* (views to the right)

Montreal may also be reached from *Newport* by the GRAND TRUNK RAILWAY viâ *Stanstead Junction, Massawippi, Lennoxville, and Sherbrooke* (comp. R 4).

From *Boston* to (74 M.) *Concord*, see R 3 b. Our line now crosses the *Merrimac* and runs towards the N. 104 M. *Lakeport*, at the head of an inlet of *Lake Winnepesaukee*, is the junction of a line to (17 M.) *Alton Bay*, one of the favourite resorts on that lake. Farther on we skirt the W. bays of *Lake Winnepesaukee*. 109 M. *Weirs* is another popular summering-place 112 M. *Meredith* is 5 M. from *Centre Harbor*, perhaps the pleasantest point on *Lake Winnepesaukee*. — 126 M. *Plymouth* (**Pemigewasset House*, \$3-4; meal-station) is the starting-point of the line to (21 M.) *North Woodstock*, at the S. end of the **Franconia Notch* (*White Mts*). Farther on, *Mt. Moosilauke* (4810 ft) is conspicuous to the right. — 169 M. *Wells River* (Rail. Restaurant), on the *Connecticut*, for lines to *Montpelier* (p 15) and the *White Mts*. Beyond (181 M.) *Barnet* we ascend along the *Passumpsic*, crossing the stream repeatedly. — 190 M. *St Johnsbury*, the junction of lines to *Fabyan's* and the *White Mts*. (comp. p. 19) and to *Magnum*, on *Lake Champlain*.

235 M. *Newport* (700 ft., *Memphremagog House*, \$2-3; *The Palace*, \$1-1½), a village with (1900) 3113 inhab, is prettily situated at the head (S. end) of *Lake Memphremagog* and is a good centre for excursions. Good view of the lake from *Prospect Hill*. *Jay Peak* (4018 ft.), 12 M. to the W., commands a wide prospect.

**Lake Memphremagog* ('beautiful water'; 682 ft.), a lovely sheet of water, 30 M. long and 2-4 M. wide, lies one-fifth in Vermont and four-fifths in Canada. It is enclosed by rocky shores and wooded hills, and its waters abound in lake-trout (*Salmo fontinis*), pickerel, perch, and bass.

A small steamer plies daily between *Newport* (see above) and *Magog*, at the N. end of the lake (there and back about 6-7 hrs). Passing *Indian Point* and the *Twain Sisters*, we cross the Canadian line near *Province Island*. On the W (left) shore we stop at (12 M.) the *Owl's Head Hotel* (\$2-3), at the foot of the prominent *Owl's Head* (3270 ft.), which is ascended hence in 2-2½ hrs. The **View* includes, on a clear day, *Montreal* and the *Green, White, and Adirondack Mts*. Farther on, the steamer passes *Long Island* and calls at some small landings. On the E shore are the country-houses of several wealthy *Montrealers*, and on the W. rises *Mt. Elephas* (*Revere House*). *Georgeville* (*Lake Hall*), on the E. bank, 20 M. from *Newport*, is a quiet and inexpensive watering-place. — *Magog* (*Park House*), at the N. end of the lake, at its outlet through the *Magog River*, affords good fishing quarters and is connected by railway (C.P.R.) with (19 M.) *Sherbrooke* (p 47). *Mt. Orford* (4500 ft.), 5 M. to the W., affords a good view of the Canadian pine-forests to the N and W.

Beyond *Newport* our line runs towards the N W., following the valley of the *Missisquoi* and entering *Canada (Quebec)* near (252 M.) *Mansonville*. Beyond (258 M.) *Glen Sutton* we re-enter Vermont. *Jay Peak* (see above) rises to the left. At (266 M.) *Richford*, the junction of a line to *St. Albans* we turn to the N. and finally leave

Vermont. At (278 M.) *Sutton Junction* we again turn towards the W., the line in a straight direction going on to *St. Guillaume* (see below) viâ *Drummondville* (p. 140). — 300 M. *Farnham* (Rail. Restaurant), on the *Yamaska*, is the junction of lines to *Stanbridge*. *St. Guillaume, Foster* (p. 47), *Sherbrooke* (p. 47), and *Montreal viâ Chambly* (see below)

FROM FARNHAM TO CHAMBLY AND MONTREAL, 33 M., *Central Vermont Railway* in $1\frac{1}{2}$ - $2\frac{3}{4}$ hrs. (fare \$1 30). — Beyond (7 M.) *St. Briggs Road* we see *Shefford Mt* (p. 136) and *Yamaska Mt* (p. 136) to the right, and *Monnoir* or *Mt. Johnson* (p. 136) to the left. From (14 M.) *Marieville* a branch-line runs to the right to (5 M.) *Rougemont*, at the foot of the hill of that name, and to (9 M.) *St. Césaire*. Near (19 M.) *Chambly Canton* we cross the *Richelieu*, obtaining a good view of the *St. Louis Rapids*. — 20 M. *Chambly Basin*, on an expansion of the *Richelieu*, was the site of one of three forts erected by the Marquis de Tiacy (p. 129) in 1665 to protect the river against the Iroquois. This wooden fort was replaced in 1709 by a stone fort, the ruins of which are seen to the right as the train leaves the station. *Chambly Fort* was captured by the Continental troops in 1775, apparently without resistance. Later it was regularly garrisoned, and in 1776-77 it formed one of the chief bases for the troops of Carleton and Burgoyne. The fort was finally abandoned in 1833. *Chambly* contains a bronze statue, by L. P. Hebert (p. 131), of *Col. de Salaberry*, who, at the head of a body of Canadians, defeated an American force at *Chateauguay* in 1813. — 32½ M. *St. Lambert*, and thence to (39 M.) *Montreal*, see p. 14.

The rest of the route to (313 M.) *St. John's* and —

343 M. *Montreal* (Windsor Street Station, p. 125) is the same as that described in R. 16.

d. Viâ Portsmouth and North Conway.

365 M. BOSTON AND MAINE RAILROAD to (140 M.) *North Conway* in 5-5½ hrs.; MAINE CENTRAL RAILROAD thence to (50 M.) *Lunenburg* in 2½-2¾ hrs.; ST. JOHNSBURY & LAKE CHAMPLAIN RAILROAD thence to (22 M.) *St. Johnsbury* in ¾-1 hr.; BOSTON & MAINE RAILROAD thence to (44 M.) *Newport* in 1½-2 hrs.; CANADIAN PACIFIC RAILWAY thence to (109 M.) *Montreal* in 4-4½ hrs. (through-fare \$9). — This line forms the shortest and quickest approach to the *White Mts.* and is also one of the regular routes to *Lake Winnepesaukee*.

Boston, see p. 17. The line crosses the *Charles* and runs to the N., near the sea. 11½ M. *Lynn*; 16 M. *Salem*, a quaint old New England town, the scene of the 'Witchcraft Delusion' of 1692; 18 M. *Beverly*, the junction of a line to *Manchester, Gloucester*, and other points on the beautiful 'North Shore'; 37 M. *Newburyport*; 46½ M. *Hampton*, for *Hampton Beach*; 49 M. *North Hampton*, for *Rye Beach*.

57 M. *Portsmouth* (**Rockingham*, from \$4), a quaint old seaport with 10,637 inhab. and a government navy-yard. The peace between Russia and Japan was concluded here on Sept. 5th, 1905. — At (67 M.) *Conway Junction* our line diverges to the left (W.). 80 M. *Rochester*. From (98 M.) *Sanbornville* a line runs to (12 M.) *Wolfeborough*, on *Lake Winnepesaukee* (p. 18). Farther on the *Ossipee* and *Sandwich Mts* are seen to the left. 135 M. *Conway*. — 140 M. *North Conway* (⁴*Kearsarge House*, \$3-5), a favourite resort on the S. margin of the *White Mts.*, one of the most picturesque and frequented districts in New England. To the left rises *Moat*

Mt., to the right *Mt Kearsarge* — From (145 M.) *Glen Station* coaches run to (3 M.) *Jackson*. Beyond (158 M.) *Bemis* the line bends to the N.W. and enters the famous *Crawford* or *White Mt Notch*, a narrow defile flanked by lofty mountains. 165 M. **Crawford House* (from \$4½), a favourite resort at the other end of the Notch 169 M. *Bretton Woods*, the station for the large **Mount Washington Hotel* (from \$5). At (170 M.) *Fabyan's* (*Fabyan House*, from \$4½) we connect with the railway to the summit of **Mt. Washington* (6293 ft.), the highest mountain in the United States to the E. of the Rockies and N. of Carolina. 173 M. *Zealand*, the junction of the line to *Bethlehem* and the *Profile House*.

At (180 M.) *Quebec Junction* the Quebec (Upper Coos) Division of the Maine Central R.R. diverges to the right, connecting with the Canadian Pacific Railway at *Cookshire Junction* (p. 46) and with the Quebec Central Railway at *Dudsuell Junction* (p. 21).

From Quebec Junction our line goes on to (187 M.) *Scott Junction*, (190 M.) *Lunenburg*, and (212 M.) *St Johnsbury*. Thence to — 365 M. *Montreal* (Windsor Street Station), see R. 3c.

4. From New York to Quebec viâ Springfield.

547 M. NEW YORK, NEW HAVEN, & HARTFORD RAILROAD to (136 M.) *Springfield* in 3½-4½ hrs.; BOSTON & MAINE R. R. thence to (110 M.) *Windsor* in 4 hrs.; CENTRAL VERMONT R. R. thence to (14 M.) *White River Junction* in ½ hr.; BOSTON & MAINE R. R. thence to (145 M.) *Sherbrooke* in 5½ hrs.; QUEBEC CENTRAL RAILWAY thence to (142 M.) *Quebec* in 5 hrs. (in all 19-20 hrs.; through-fare \$ 12, sleeper from Springfield \$ 2½)

Passengers may also proceed to Quebec viâ *Boston* (see R. 5).

From New York to (260 M.) *White River Junction*, see R. 2c. Beyond White River Junction we continue to follow the *Connecticut River* to (301 M.) *Wells River*. Thence to (367 M.) *Newport*, see R. 3c.

Our line now diverges from the route to Montreal and bends towards the N.E. A glimpse of *Lake Memphremagog* (p. 18) is seen to the left. We enter *Canada*. 372 M. *Stanstead Junction* (Canadian custom-house), for a short line to (4 M.) *Stanstead* (U.S. Agent) with a Wesleyan college (300 students); 375 M. *Smith's Mills*, 379 M. *Libby's Mills*; 384 M. *Ayer's Flats*; 386 M. *Massawippi*. — 393 M. *North Hatley* (**Glen Villa*, 3 M. from the rail. station, from \$ 3, boarding-houses of *Nelson Le Baron*, *McKay*, *Miss Moy*, and others, from \$ 7 a week), pleasantly situated on *Lake Massawippi* (14 M. long), a small village with about 300 inhab., is now much visited in summer. Its attractions include beautiful drives round the lake, canoeing, fishing, and an excellent golf-course. — 397 M. *Capelton*. — 402 M. *Lennoxville*, see p. 47.

405 M. *Sherbrooke*, see pp. 47, 19. We here cross the Can. Pacific Railway and reach the lines of the Quebec Central Railway, which we follow to Quebec. Most of the country traversed is heavily

timbered and scantily peopled. — 415 M. *Ascot*; 421 M. *East Angus*. At (429 M.) *Dudswell Junction* (Rail. Restaurant) we connect with the *Maine Central Railroad* (comp. p. 20). 432 M. *Marbleton*, with lime-pits and marble-quarries; 441 M. *Weedon*; 452 M. *Garthby*, on *Lake Aylmer*; 462 M. *Coleraine*. — 470 M. *Thetford*, with famous asbestos-mines, the largest of which ('Bell's Mine') has an area of several acres and reaches a depth of 150 ft. The processes of quarrying and preparing the asbestos are interesting. — Numerous characteristic French villages are passed, with red-roofed houses and prominent churches. From (499 M.) *Tring Junction* a line runs to (60 M.) *Megantic* (p. 46) and from (203 M.) *Beauce Junction* another runs to (15 M.) *Beauceville*. Our line now for a time follows the valley of the *Chaudière*, the route by which Benedict Arnold reached Quebec in 1775 (p. 147). 525 M. *St. Anselme*, in the *Etchemin Valley*; 541 M. *Harlaka Junction* (p. 96). From (546 M.) *Lévis* passengers are ferried across the *St. Lawrence* to (547 M.) *Quebec* (see p. 141).

5. From Boston to Quebec.

417 M. BOSTON & MAINE R R to (275 M.) *Sherbrooke* in 10-11 hrs; QUEBEC CENTRAL RAILWAY thence to (142 M.) *Quebec* in 5¾-10 hrs (in all 16-21 hrs; through-fare \$ 11; sleeper \$ 2).

From Boston to (235 M.) *Newport*, see R. 3 c; thence to (417 M.) *Quebec*, see R. 4.

6. From New York to Toronto.

531 M. NEW YORK CENTRAL & HUDSON RIVER RAILROAD to (416 M.) *Niagara Falls* in 9-16½ hrs; GRAND TRUNK RAILWAY thence to (85 M.) *Toronto* in 2¼-3 hrs (in all 12-20 hrs; through-fare \$ 11 85; sleeper \$ 3).

Alternative routes to Niagara Falls are offered by the *West Shore*, the *Delaware, Lackawanna, & Western*, the *Erie*, and the *Lehigh Valley Railways*, all of which are described in *Baedeker's United States*. A pleasant alternative route from Niagara Falls to Toronto is afforded by the steamer across the Lake of Ontario (see p. 205).

From New York to (238 M.) *Utica*, see R. 2 d. — Our line continues to run towards the W. 252 M. *Rome*. Beyond (291 M.) *Syracuse* (*The Yates*, \$ 4-5, R. from \$ 1; Rail. Restaurant; pop. 103,374), to the left of the railway, we see the steel 'towers' of the aluminum cable bringing power (90,000 horse-power) to that city from Niagara Falls. 349 M. *Palmyra*. At (371 M.) *Rochester* (**Powers Hotel*, from \$ 3, Rail. Restaurant; 162,608 inhab.) the direct railway to Niagara Falls diverges from the line to Buffalo (p. 215) and runs viâ (427 M.) *Lockport* and (444 M.) *Suspension Bridge*. Through-passengers to Toronto, who do not want to stop at Niagara, proceed across the bridge into Canada (small articles of baggage examined). The route from Suspension Bridge to (83 M.) *Toronto* is described, in the reverse way, at pp. 209-211.

For *Niagara Falls*, see p. 215.

7. From Boston to the Maritime Provinces by Sea.

The following routes are largely used in summer, especially by those who are fond of the sea. *Round Trip Excursion Tickets* are issued at moderate rates by all the companies, acting in connection with the railways of the Maritime Provinces and offering a great variety of routes. Full information as to these is furnished on application. The data below refer to the service of 1906 and are, of course, liable to alteration. See the advertisements in the daily papers or apply to the steamboat-companies.

Lovers of the sea may also go all the way from *New York* to the Maritime Provinces by steamer, either via the *Dominion Atlantic Railway's* boat to *Yarmouth* (see p. 23) or by the *Red Cross Line* to *Halifax* (50 hrs.; fare \$13.25, including stateroom-butt). The latter steamer (starting from Pier B, foot of Richards St., Brooklyn) goes on to St. John's, Newfoundland (comp. p. 102).

a. From Boston to Eastport and St. John.

320 M. STEAMERS of the *Eastern Steamship Co.* (*International Division*) ply 1-5 times weekly (acc. to the season) to (26) M. *Eastport* in 16-17 hrs (fare \$4.75) and to (320 M.) *St. John* in 18-20 hrs. (\$5; stateroom \$1-5, meals à la carte). The steamers sail from Union Wharf, those for St. John direct at noon, and those calling at *Portland* (p. 24) and *Eastport* at 9 a.m. Baggage is examined by the custom-house officers on board the steamer, between *Eastport* and *St. John*. The latest information should be obtained from the agents of the company (Union Wharf and 293 Washington St., Boston) or from the daily papers. The steamers are comfortable and well-equipped, especially the 'Calvin Austin' of the direct line.

Railway Route from Boston to *St. John*, see p. 24. *Eastport* is also reached by following this route to *St. Andrews* (p. 42), and thence by steamer down the *St. Croix* (p. 43).

Boston, see p. 17. The pleasant sail through *Boston Harbour* described in *Baedeker's United States*, to which reference is also made for the route from *Portland* to *Eastport*. The direct steamer (see above) soon passes out of sight of land, and it is only on the longest days of summer that the coast of *Maine* becomes dimly visible to the left before nightfall. *Grand Manan* (p. 45), with its fine cliffs, is passed in the dark. When the tide serves, the steamer reaches *Eastport* by the *Narrows*, between *Lubec* on the left and the island of *Campobello* (p. 44) on the right. At the entrance of this channel is *Quoddy Head Light* (1.), marking the E. limit of the United States. When the tide is unfavourable, we pass outside *Campobello* and approach *Eastport* from the E., with *Deer Island* to our right.

Lubec (*Hillside House*, \$2-3; *Merchants' Hotel*, \$2), at which the steamers call in summer both going and coming, is a pleasant little watering-place. The Young Men's Christian Associations of New England hold encampments at (7 M.) *North Lubec* (Nemattanoo, \$2½-3) in summer.

260 M. *Eastport* (*Quoddy House*, \$2-3), the easternmost settlement in the United States, with (1900) 5311 inhab. and an abandoned fort, is finely situated on an island in *Passamaquoddy Bay*, connected with the mainland by a bridge. Passengers for *Campobello* (p. 44), *Grand Manan* (p. 45), *St. Andrews* (p. 42), and points on the *St. Croix* (p. 43) leave the steamer here.

After lying for about $1\frac{1}{2}$ hr. at Eastport, the steamer once more heads for the E., crosses the neck of Passamaquoddy Bay, and ascends through the **Bay of Fundy**, noted for its strong tides and currents (comp. p. 76). The coast of New Brunswick is in sight to the left all the way to St. John (3 hrs.) As we enter St. John Harbour, *Partridge Island*, with its lighthouse, fog-whistle, and quarantine station, lies to the right, while the roofs and spires of *West End* (*Carleton*; p. 32) are seen to the left. Our steamer threads its way amid the shipping of the busy lumbering port and lies to at *Reed's Point Wharf* (Plan of St. John, D 3). St. John makes a particularly picturesque effect as seen from the water.

320 M. **St. John**, see p. 27.

b. From Boston to Yarmouth.

230 M. STEAMERS of the *Dominion Atlantic Railway* ply daily in summer, except Sat., in 15 hrs., leaving Long Wharf, Boston, at 2 p.m., and reaching *Yarmouth* (Lower Wharf) about 7.30 a.m. next day (fare \$4; stateroom \$1 $\frac{1}{2}$ -6; meals 75 c.). These steamers, which are fine boats with twin screws and electric lighting, make direct connection with the Digby and Halifax trains of the Dominion Atlantic Railway (see R.R. 20, 22). Through-tickets sold to all important points in the Maritime Provinces and Newfoundland. Agent, *J. F. Masters*, Long Wharf, Boston. — Baggage is examined by the custom-house officers on the wharf at Yarmouth.

This company also maintains a direct weekly service by sea between *New York* and Yarmouth, the steamer 'Prince Arthur' leaving the former port (Pier 14, East River) on Sat. at 11 a.m. and reaching Yarmouth on Sun. evening (fare \$16; stateroom from \$2).

Boston and *Boston Harbour*, see p. 17. On passing *Boston Light*, the steamer steers in an E. N. E. course and soon loses sight of land. Early risers will obtain a good view of Yarmouth while sailing up the harbour.

230 M. **Yarmouth**, see p. 80. Connection is made here with the Dominion Atlantic and the Halifax & South-Western railways, with coaches to various points not accessible by railway, and with steamers to *Barrington*, *Shelburne*, *Lockeport*, *Lunenburg*, *Halifax*, and *St. John* (comp. pp. 28, 80, 81).

c. From Boston to Halifax.

390 M. STEAMERS of the *Canada Atlantic & Plant Steamship Co.* in 29 hrs., leaving Boston (Commercial Wharf) 2-3 times weekly in summer (June-Sept.) and once a week in winter (fare \$7, including berth, stateroom-berth \$1-2; meals 50-75 c.). Through-tickets sold to all important points in the Maritime Provinces. — The boat leaving Boston at noon on Tues. goes on from Halifax (at 8 p.m. on Wed.) to (570 M.) *Hawkesbury* (p. 62; through-fare \$9; stateroom-berth \$2) and (660 M.) *Charlottetown* (p. 98; through-fare \$10, stateroom-berth \$2-3). Baggage is examined on arrival at the wharf. General Manager, *A. W. Perry*, Commercial Wharf, Boston.

On leaving *Boston Harbour* (p. 17), the steamer heads to the E.N.E. and soon loses sight of land. The first points of Nova Scotia sighted (to the left) are *Seal Island* and then *Cape Sable*. Beyond this point the steamer skirts the ragged S.E. coast of the peninsula,

which is generally visible to the left (comp. R. 21). After passing *Cape Sambro*, we enter *Halifax Harbour* between the lights of *Chebucto Head* (l.) and *Devil Island* (r.). A little farther on we pass to the W. (l.) of *Macnab's Island* (p. 56) and *George's Island* (p. 56) and draw up at the *Halifax Wharf* (p. 50). The views as we ascend the harbour are very fine (comp. p. 56).

For the steamboat-route from Halifax to *Hawkesbury*, *Pictou*, and *Charlottetown*, see p. 63.

8. From Boston to St. John by Railway.

418 M. BOSTON & MAINE RAILROAD to (108 M.) *Portland* in 3 hrs., MAINE CENTRAL RAILROAD thence to (250 M.) *Fanebboro* in 6-8 hrs., CANADIAN PACIFIC RAILWAY thence to (90 M.) *St. John* in 3 3/4 hrs. (through-express in 14-15 hrs.; fare \$8.50, sleeper \$2 1/2, parlor-car \$2) — In summer through-cars run from Boston to *Point du Chêne* (p. 87), connecting with the steamer to Prince Edward Island (comp. p. 97).

For details of the United States portion of this route, see *Baedeker's United States*.

Boston, see p. 17. The trains start from the *North Station*. — 11 1/2 M. *Lynn*, 13 M. *Swampscott*; 16 M. *Salem*, 18 M. *Beverly*, the junction of a branch-line to *Gloucester* and *Rockport*, 37 M. *Newburyport*; 57 M. *Portsmouth* (see p. 19); 83 M. *Kennebunk*; 92 M. *Biddeford*, 93 M. *Saco*, these two on the *Saco River*; 97 M. *Old Orchard Beach*.

108 M. *Portland* (*Lafayette*, *Congress Square*, *Falmouth House*, *Preble House*, \$3-5), the largest city in Maine, with (1900) 50,145 inhab., is finely situated on a hilly peninsula projecting into *Casco Bay*. The poet *Longfellow* (1807-82) was a native of Portland, and the house in which he was born and that in which he afterwards lived are among the sights of the town.

Some of the trains between Boston and Portland run by the so-called 'Western Division', viâ *Andover*, *Lawrence*, *Haverhill*, and *Dover*.

138 M. *Brunswick* (*Brunswick House*, \$1-1 1/2; *Rail. Restaurant*), a town of (1900) 6806 inhab., at the head of the tidal waters of the *Androscoggin*, is the seat of *Bowdoin College* (350-400 students). — 159 M. *Iceboro*, with huge ice-houses.

171 M. *Augusta* (*Augusta House*, *Cony House*, \$2-3), the capital of Maine, with (1900) 11,683 inhab. and a fine *State House*, lies on both sides of the *Kennebec*. — Beyond Augusta we follow the *Kennebec* to (190 M.) *Waterville*. — 218 M. *Newport* is the junction of a railway to *Dexter*, *Dover*, and *Moosehead Lake* (p. 46).

245 M. *Bangor* (*Bangor House*, \$2 1/2-4; *Penobscot Exchange*, from \$2; *Rail. Restaurant*), an important lumber-trading town, with (1900) 21,850 inhab., at the head of navigation of the *Penobscot River*, is more fully described in *Baedeker's United States*. It is the junction of a branch-railway to (50 M.) *Mt. Desert* (see *Baedeker's United States*) — 259 M. *Oldtown*, 277 M. *Passadunkaeg*.

At (301 M.) *Mattawamkeag* (comp. p. 46) we cross the *Penobscot* (p. 46) and join the C. P. R. line from Montreal to St. John (R. 16). For the next 55 M. the line passes through a wild and sparsely settled region, at first following the *Mattawamkeag River*.

358 M. *Vanceboro* (*Rail. Restaurant*) is the frontier-station, where the hand-baggage of passengers from the United States is examined. The time changes here from the 'Eastern' to the 'Atlantic' standard (one hour in advance; comp. p. xii). — Beyond Vanceboro station we cross the *St. Croix* and enter *New Brunswick* (p. 36). — From (366 M.) *McAdam Junction* (**McAdam Station Hotel*, from \$2½, meal 75 c.) lines run to the N. to *Woodstock* and to the S. to *St. Andrews*.

FROM MCADAM JUNCTION TO WOODSTOCK, 52 M., C.P.R. in 2-3 hrs — The train runs to the N. through a wooded district. 22 M. *Canterbury*, near *Skiff Lake*, with its landlocked salmon. Farther on we cross the *Eel River*. From (40 M.) *Debec Junction* a branch-line runs to (8 M.) *Houlton*, a small town in Maine. About 6 M. farther on we come in sight of the *St. John*, of which we have views to the right. — 52 M. *Woodstock*, see p. 40.

FROM MCADAM JUNCTION TO ST STEPHEN (34 M.) AND ST. ANDREWS (43 M.), C.P.R., in 1¼-2¼ hrs. — This line runs towards the S., through a dreary and featureless district. At (14 M.) *Watt Junction* it forks, the right branch running to (34 M.) *St. Stephen* (p. 43) and the left to (42 M.) *St. Andrews* (p. 42).

375 M. *Magaguadavic* (pron. 'Magadavy'), on a lake of the same name. About 8 M. to the S. of (385 M.) *Harvey* lies *Lake Oromocto*, an angling-resort. From (386 M.) *Fredericton Junction* a line runs to the N. to (22 M.) *Fredericton* (comp. p. 38). The remaining stations are unimportant. As we near St. John the line skirts the 'Long Reach' of the *St. John River* (l.; comp. p. 34) for some distance, and we finally enter the city by a fine cantilever bridge, crossing the river just above the Suspension Bridge (p. 32).

448 M. *St. John*, see R. 10.

9. From Portland to Montreal and Quebec.

a. Via the Grand Trunk Railway.

GRAND TRUNK RAILWAY to (297 M.) *Montreal* in 10½-12 hrs. (fare \$7½; drawing-room car \$1½, sleeping-berth \$2), to (313 M.) *Quebec* in 11-11½ hrs. (fares \$8½, \$2). This route forms a pleasant approach to Canada, skirting the N. margin of the White Mts. (p. 19; views to the left). From Boston to Canada by this route takes 3-4 hrs. more.

Portland, see p. 24. — The train crosses the *Presumpscot River* and intersects the Maine Central R.R. at (11 M.) *Yarmouth*. As far as (27 M.) *Danville Junction* the Maine Central R.R. (see p. 26) runs parallel to our line (left). Beyond (62 M.) *Bryant's Pond* (700 ft.) we enter a mountainous district. 70 M. *Bethel* (1000 ft.). We now obtain views of the *White Mts* (p. 19) to the left. — 91 M. *Gorham* (860 ft., **Alpine House*; meal-station) is the chief gateway to the *White Mts.* from the N. — We now follow the *Androscoggin*. Picturesque

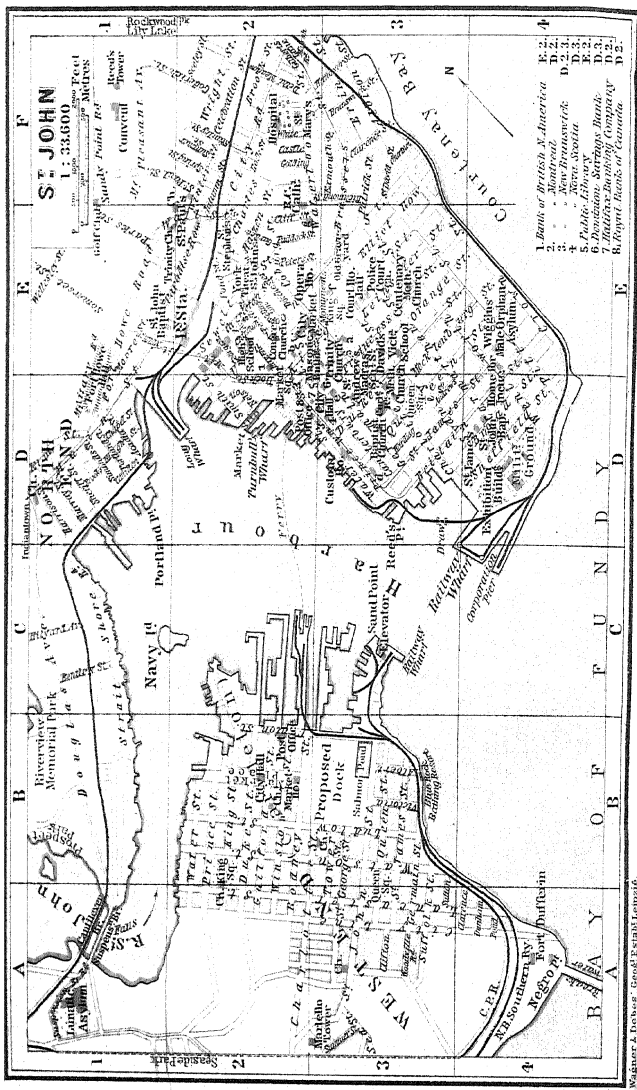
scenery. 98 M. *Berlin*; 134 M. *North Stratford*. 149 M. *Island Pond* (1500 ft., Stewart House, \$2; Rail. Restaurant) is the American frontier-station (hand-baggage examined). At (165 M.) *Norton Mills* we enter *Canada* and begin to descend the *Coaticooke*. 174 M. *Coaticooke* (U.S. Consul) — 193 M. *Lennoxville* (see p. 47) is the junction of the Passumpsic Division of the Boston & Maine R.R., and (196 M.) *Sherbrooke* (p. 47) is the junction of the Canadian Pacific Railway to *Lake Megantic*, *Moosehead Lake*, and *St. John* (R. 16). — We now follow the *St. Francis* to (221 M.) *Richmond* (p. 141), where our line forks, the left (main) branch running to (76 M.) *Montreal* (see R. 29 b) and the right to (97 M.) *Quebec* (see R. 29 b).

b. *Viâ the Maine Central Railroad.*

RAILWAY to (236 M.) *Montreal* in 12-16 hrs (fare \$7½, parlor-car \$1½, berth \$2); to (321 M.) *Quebec* in 14½ hrs. (fare \$8½, parlor-car \$1½). This line traverses the centre of the White Mts. (seats to the right; observation-cars attached to the trains in the mountain-district) Through parlor and sleeping cars run from Portland to Montreal and Quebec.

Portland, see p. 24. The train starts from the Union Station, crosses the *Presumpscot* twice, and runs towards the W. 17 M. *Sebago Lake*; 50 M. *Fryeburg*. 60 M. *North Conway*, and thence to — 286 M. *Montreal* (Windsor Street Station), see R. 3 d.

The train to (321 M.) *Quebec* (p. 145) diverges at (100 M.) *Quebec Junction* (p. 20) and runs viâ *Lancaster*, *Colebrook*, *Cookshire Junction* (p. 46), and *Dudswell Junction* (p. 21).



II. NEW BRUNSWICK.

Route	Page
10. St. John	27
Environs of St. John	33
11. From St. John to Fredericton	33
a. By River	33
Washademoak Lake Grand Lake	35
Excursions from Fredericton	38
b. By Railway	38
12. From Fredericton to Woodstock	39
a. By Railway	39
b. By River	39
13. From Woodstock to Grand Falls and Edmundston	40
The Tobique	40
From Grand River to the Restigouche	41
14. From St. John to St. Stephen and St. Andrews	41
a. By Railway	41
b. By Steamer	42
15. Campobello and Grand Manan	44
a. Campobello	44
b. Grand Manan	45
16. From St. John to Montreal	46
Moosehead Lake	46
17. From St. John to Quebec (Lévis)	48
From Salisbury to Albert	48

10. St. John.

Arrival. The INTERCOLONIAL STATION (Pl. E, 2, *Rail. Restaurant*), also used by the C P R. and other lines entering St. John, lies at the N. end of the city, $\frac{1}{3}$ - $\frac{1}{2}$ M. from the chief hotels. The New Brunswick Southern Line for *St. Stephen* (R. 14) has its terminus at *West End*, formerly *Carleton* (comp. pp 32, 41). — The Transatlantic steamers land in winter at *Sand Point* (Pl. C, 3), on the W. side of the harbour, but in summer, most of them, like the Boston and Digby boats, land at *Reed's Point* (Pl. D, 3); the steamers for Eastport and Grand Manan (R. 15) land at *Turnbull's Wharf* (Pl. D, 2). — Cabs (see below) meet the chief trains and steamers.

Hotels. *ROYAL (Pl. b; E, 2), King St., perhaps the best hotel in the Maritime Provinces, \$3-4; DUFFERIN HOUSE (Pl. a; E, 3), Charlotte St., cor. of King Sq., from \$2.50; VICTORIA (Pl. c; E, 2, 3), 21 King St., \$2 $\frac{1}{2}$ -3; NEW VICTORIA (Pl. d; D, 3), 342 Prince William St., \$2-2 $\frac{1}{2}$; CLIFTON (Pl. e; D, 3), Princess St., cor. of Germain St., \$2-2 $\frac{1}{2}$; PARK HOTEL (Pl. f; E, 3), 47 King Square, \$2-2 $\frac{1}{2}$; CARVELL HALL (Pl. g; E, 2), 71 Waterloo St., an excellent private boarding-house.

Tramways (electric) traverse the chief streets and run viâ *Indiantown* (p 33) and Douglas Ave. to the *Reversible Falls* (p 32) and *Seaside Park* (p 32), and viâ Paradise Row to *Rockwood Park* (p. 33), uniform fare 5 c.

Cabs. Per drive within the city, 1 pers 30 c., each addit. pers. 25 c.; per $\frac{1}{2}$ hr. 50 c.; ordinary luggage free.

Observation Cars (automobiles and backboards), calling at the hotels; about 10 a.m. and 2 p.m., make a round trip of 2 hrs viâ Rockwood Park, Mt Pleasant, the Falls, the Martello Tower, and the West End Ferry (fare 50 c.).

Steamers. *Ferry Steamers* ply every $\frac{1}{4}$ hr from the foot of Princess St. (Pl. D, 2) to *West End* (Carleton, fare 2c) — *River Steamers*, starting from *Indiantown* (beyond Pl. D, 1), run to *Fredericton* and intermediate points (see R. 11); to points on the *Kennebecasis* (p. 34); to *Belleisle Bay* (p. 34); to *Washademoak Lake* (see p. 35); to *Hampton* (p. 48), and to *Grand Lake* (p. 35). — *Sea-going Steamers* run to *Eastport*, *Portland*, and *Boston* (see R. 7a); across the Bay of Fundy to *Digby* (R. 20a); to *Yarmouth* (p. 80), *Halifax* (p. 50), and other Nova Scotia ports (every Thurs. at 6 p m); to *Grand Manan* (p. 45), to *Parrsboro* (p. 85) and *Kingsport* (p. 74); to *New York* (p. 10); to *London*; to *Antwerp*; and to various other ports.

Places of Amusement. *Opera House* (Pl. E, 2), 203 Union St. — Concerts, etc., are given at the *York Theatre* (Pl. E, 2), Carleton St., *West End City Hall* (Pl. B, 2), and *Union Hall*, North End (Portland). — *Shamrock Club Grounds*, near Fort Howe (p. 31); *St. John Club Athletic Grounds*, in the E. part of the city — *Skating Rinks*, Queen Square and City Road; *St. Andrew's Curling Club* (Pl. D, 3), Charlotte St.; *Thistle Curling Club*, Golding St. (Pl. F, 2). — *Moosepath Trotting Park*, see p. 33 — *Union Club*, German St (Pl. D, 3). — *St. John Golf Club* (Pl. F, 1), just to the N of the town

Consuls. United States, *Mr. Gebhard Willrich*, German, *Mr. Robert Thomson*; French Consular Agent, *Mr. Conrad de Bury*; Italian, *Mr. Charles McLachlan*; Austrian and Scandinavian Vice-Consul, *Mr. P. W. Thompson*.

Tourist Information Bureau, 85 Prince William St. (literature, maps, and information gratis)

Post Office (Pl. D, 2), Prince William St (open from 6 30 a m. to 9 p m; Money Order Office 9-4).

St. John, the largest city and commercial centre of New Brunswick and one of the most important ship-owning cities of Canada, is picturesquely situated in $45^{\circ} 14' 6''$ N. lat. and $66^{\circ} 3' 30''$ W. long., at the point where the *River St. John* pours its waters into the Bay of Fundy. The population in 1901 was 40,711, giving it the eighth place among the cities of the Dominion. The main part of the city, which is well built of red brick and regularly laid out, lies on the E. side of the harbour, but the thriving suburb of *West End* or *Carleton* (p. 32) is situated on the W. side. The site of the city is a rocky and ridgy peninsula, through which streets could be cut and levelled only by dint of prodigious labour and expense; and the visitor is met every here and there by protruding masses of slaty rock which remind him of the patience and energy of the original settlers. The deep and commodious harbour is open for navigation all the year round. In the world of commerce St. John is chiefly known for its immense shipments of lumber, but it also carries on a considerable trade in plaster, lime, fruit, flour, furs, hay, and other articles, besides important fisheries. Its manufactures include cotton and woollen goods, steam-engines, machinery, brushes, leather, and paper. *King Street* (p. 30) is the chief business-thoroughfare, while the finest private residences are chiefly in or near *Queen Square* (p. 30), *Germain Street* (p. 30), *Coburg Street* (Pl. E, 2), and *Carleton Street* (Pl. E, 2), at *Mt Pleasant* (p. 31), and in *Douglas Avenue* at North End (p. 31).

History. St. John owes its name to Champlain and De Monts, who first visited the harbour on the day of St. John the Baptist (June 24th), 1604, finding here a settlement of Micmac Indians, on Navy Island (p. 32). The first permanent European settlement in New Brunswick was made in

1631-5, when *Charles de la Tour*, who had received a grant of this part of Acadia, built a fort on St. John Harbour. La Tour here carried on a lucrative fur-trade with the Indians for some time, but unfortunately became involved in a dispute with his rival and enemy, *D'Aulnay Charnisay* of Port Royal (p. 75), who had the more powerful influence at his back in France. In 1643 Charnisay attacked Fort La Tour† with six ships and 500 men. La Tour, however, succeeded in escaping in a friendly ship from La Rochelle, and returned from Boston with so powerful allies that Charnisay had to raise the siege and retreat. Two years later, taking advantage of a moment when La Tour was absent and the garrison weak, Charnisay returned to the attack; but met with an obstinate resistance from the heroic Huguenot wife of La Tour, and finally gained his point only through the treachery of a Swiss sentinel. He hanged the whole garrison before the eyes of Mme. de la Tour, who, soon after, died heart-broken (see *Whittier's* ballad). Charnisay destroyed La Tour's fort and built another one on the opposite side of the harbour. He died in 1650; and La Tour ultimately regained possession of his lost domain by marrying his widow (1653). In 1654 Fort La Tour, with the rest of Acadia, was seized and occupied (till 1670) by an expedition despatched by Oliver Cromwell. Between 1690 and 1758 the mouth of the St. John was the scene of several naval encounters between the French on the one side and the British or New Englanders on the other; but it was not till the latter year that the post was captured by an Anglo-American force. The fort captured at this time was renamed *Fort Frederick*. In 1759-65 a few New Englanders, led by *Messrs Simonds, White, and Peabody*, formed a small settlement here; and in 1777, after the destruction of Fort Frederick by American privateers in 1775 the fortification known as *Fort Howe* (p. 31) was erected. The real foundation of the present city of St. John dates, however, from 1783, during which year a body of about 10,000 Loyalists landed in the harbour. New Brunswick was made a separate province the following year, and its first Legislature met at St. John on Jan. 3^d, 1786. The settlement was at first called *Pair Town*, after the then Governor of Nova Scotia, but it was soon rechristened. The charter of St. John dates from May 18th, 1785, making it the oldest incorporated town in Canada. The seat of government was removed to Fredericton in 1788 (see p. 36). In 1824 St. John contained 8000 inhab. and possessed 16,000 tons of shipping. In 1839 these figures had risen to 9000 and 80,680. The population in 1851 was 27,745, in 1871 it was 28,805, and in 1891 it was 39,179 (including Portland). In 1837, and subsequently, the city was visited by destructive conflagrations; but the memory of these has been entirely swallowed up by the *Great Fire of 1877* (June 20th), which swept away fully one-third of the city, rendered 15,000 people homeless, and destroyed property to the value of \$29,000,000. Since then the city has been rebuilt on a much more substantial scale; but traces of the fire can still be seen in the shape of vacant sites.

General Benedict Arnold lived and carried on business at St. John from 1786 to 1791.

In 1905 the total value of the exports of St. John was \$13,548,041 (including lumber to the value of \$3,981,449), of the imports \$5,582,477. In the year ending June 30th, 1905, its harbour was entered and cleared by 2623 vessels of 1,558,855 tons. Alewives, shad, lobster, and salmon are caught in the harbour to the annual value of \$120,000. In 1901 the city contained 187 industrial establishments, employing 4688 hands and producing goods to the value of \$6,712,770. The extreme range of temperature is from about 15° below zero (Fahr.) to 85° above.

KING SQUARE (Pl. E, 3), near the centre of St. John proper, may be conveniently taken as the starting-point of our walks about town. The square, which is planted with trees, contains a fountain and

† The site of this fort is disputed, but the weight of evidence seems in favour of *Furkman* and *Ganong*, who place it on the E. side of the harbour, probably at Portland Point (Pl. D, 1)

two monuments. — one commemorating the landing of the Loyalists in 1783 (p. 29) and the date of the city charter (1785), the other to the memory of a brave youth, *J. F. Young* (d. 1890), who was drowned in the endeavour to save another's life. On the E. side of the square are the *Court House* (Pl. E, 3) and *Gaol*. On the W. side is the *Market* (Pl. E, 2). — To the E., King Square is adjoined by the OLD GRAVEYARD (Pl. E, 3), its paths now used as public walks and lined with many old tombstones and quaint epitaphs.

The wide KING STREET (Pl. D-F, 2, 3), with many of the principal shops, banks, and hotels, descends from King Sq. towards the W., crossing *Market Square*, where carters congregate with their 'slovens' (curious low-hung carts), and ending at the *Market Slip* (Pl. D, 2), which was the landing-place of the Loyalists (p. 29). — PRINCE WILLIAM STREET (Pl. D, E, 2, 3), running to the S. from Market Sq., passes the *Bank of Montreal* (Pl. 2; D, 2); the *Post Office* (Pl. D, 2), at the corner of Princess St.; the substantial stone building of the *City Hall* (Pl. D, 3), opposite the last; the *Bank of New Brunswick* (Pl. 3; D, 2, 3); and the large and handsome *Custom House* (Pl. D, 3), with its dome and towers (views from roof). The street ends at REED'S POINT WHARF (Pl. D, 3). — We may continue our walk from this point along the water's edge to the MILITARY GROUNDS, with the *Exhibition Buildings* (Pl. D, 4), where largely attended exhibitions are held every second year (autumn).

In Hazen Ave., running to the N. from Market Square, is the new Public Library (Pl. 9, E, 2), in a building presented by Mr. Carnegie and opened in 1905. It contains about 15,000 volumes. — The new quarters of the *Young Men's Christian Association* are also to be in this street.

Returning from the Military Grounds towards the centre of the city via CHARLOTTE STREET (Pl. D, E, 3, 2), we soon reach QUEEN SQUARE (Pl. D, 3), among the houses of which may be mentioned that of the late *Lieut. Governor Boyd* (d. 1893, N. side) and the effective and well-proportioned residence of *Mr. Simeon Jones* (N.E. angle), used by the Prince of Wales on his visit in 1901. On the N. side is the *Queen Square Methodist Church*, and on the W. side are the *Skating Rink* and the rink of *St. Andrew's Curling Club*. In Queen Square is an old cannon, a relic of the period of French occupation, believed to have come from the ramparts of Fort la Tour (p. 29) and presented to the city by the New Brunswick Historical Society in 1906. — In Charlotte St., farther on, to the left, stands the large *Trinity Church* (Pl. E, 3), the front of which is turned towards Germain St. This handsome building, with its tall steeple, occupies the site of the church built by the Loyalists in 1788, which was destroyed by the great fire of 1877.

The INTERIOR is noticeable for its roomy chancel, beautiful reredos, and good stained-glass windows. At the W. end of the church is an old carved wooden *British Coat-of-Arms*, brought by the Loyalists from the old State House at the evacuation of Boston in 1776.

GERMAIN STREET (Pl. D, E, 3, 2), running parallel with and between Prince William St. and Charlotte St., contains many hand-

some private residences; a large *Baptist Church* (Pl. D, 3); *St. Andrew's Presbyterian Church* (Pl. D, 3); the handsome *Union Club* (Pl. D, 3); the rooms of the *Church of England Institute*, adjoining the last; and the city quarters of the *Royal Kennebecasis Yacht Club* and the *Masonic Temple* (Pl. E, 2), adjoining Trinity Church. At the N. end of the street is *St. John's*, or the *Stone Church* (Pl. E, 2), the oldest church-building in the city (1824; interior practically unchanged). The bell is on the outside of the top of the tower. The Stone Church is adjoined by the *York Theatre* (Pl. E, 2). — Adjacent, in Union St., are the new *High School* (Pl. E, 2) and (opposite) the fine rooms of the *Natural History Society*, containing many interesting relics and specimens.

Among the other buildings of note in the part of the city to the S. of King St. are the *Home for Incurables* (Pl. E, 3, 4); the *Wiggins Asylum for Male Orphans* (Pl. E, 4), a handsome building of red and grey sandstone, the *Mater Misericordiae Hospital*, Sydney St., opposite Orange St. (Pl. E, 3), the *Centenary Methodist Church* (Pl. E, 3), a handsome building with a seating capacity of over 2000; the *Leinster Street Baptist Church* (Pl. E, 3); *St. David's Presbyterian Church* (Pl. E, 3), Sydney St., *St. John the Baptist's Church* (Pl. D, 4; R. C.) and *St. James's Church* (Pl. D, 4; Epis.), Broad St.; the *Victoria School* (Pl. E, 3) and the *Madras School* (Pl. D, 3), Duke St.

Waterloo Street (Pl. E, F, 2), beginning at the N.W. angle of the Old Graveyard (p. 30), leads to the ***Roman Catholic Cathedral** (Pl. E, F, 2), a large Gothic building of marble and sandstone, 200 ft. long, with a lofty spire.

The architecture of the INTERIOR is simple and severe, and the stained-glass windows are unusually good for a modern church. The transepts are 110 ft. long. Over the S.E. door is a bas-relief of the Lord's Supper.

Adjoining the cathedral, in Cliff St., are the *Bishop's Palace* and an *Orphan Asylum*. On the other side of the cathedral is a large building occupied by the *Sisters of the Good Shepherd*, with a home for fallen women.

Farther on, Waterloo St. passes the *City Hospital* (Pl. F, 2), a circular building with two large wings on a commanding height (view). The street ends at the *Marsh Bridge*, at the head of *Courtenay Bay*, the arm of the sea to the E. of the St. John peninsula.

The old city of St. John is separated from **North End (Portland)** and the heights of **Mt. Pleasant** by a deep ravine traversed by the *Intercolonial Railway* (comp. Pl. E, F, 2). In the valley are the *Skating Rink*, *St. Paul's Church* (Pl. E, F, 2), *Holy Trinity Church* (Pl. E, 1), and *St. Stephen's Church* (Pl. E, 2). The visitor should not omit to cross the valley (easiest route viâ Coburg and Garden Sts., Pl. E, 2) and ascend the opposite heights for the sake of the view from the summit.

The *View includes the city, with its fine harbour and *Courtenay Bay*; the suburb of *West End* or *Carleton* (see p. 32), on the opposite side of the harbour, *Lily Lake* and *Rockwood Park* to the E., the irregular wood-clad limestone hills to the N., with stretches of the *Kennebecasis*, etc.

Another good point of view is ***Fort Howe Hill** (Pl. D, E, 1), a mass of limestone crowned by the remains of the old fort of that name (p. 29). An old well here, once used by the garrison, is now choked with rubbish. Here, too, is *Jenny's Spring*, so named from the tradi-

tion that it was here that Cobbett, then a soldier in the 54th regiment, fell in love with his future wife, then a girl of thirteen.

"In about three mornings after I had first seen her, I had, by an invitation to breakfast with me, got up two young men to join me in my walk; and our road lay by the house of her father and mother. It was hardly light, but she was out on the snow, scrubbing out a washing-tub. 'That's the girl for me', said I, when we had got out of her hearing" (Cobbett). About six months later Cobbett's regiment was removed to Fredericton, while the girl returned to England. He sent her the whole of his savings, amounting to 150 guineas, begging her "not to spare the money, but to buy herself good clothes, and to live without hard work". Nevertheless, when he returned to England at the end of four years, he found his "little girl a servant of all work at five pounds a year, and without hardly saying a word about the matter, she put into my hands *the whole of my 150 guineas unbroken*". It is satisfactory to know that their marriage was as happy as it should have been.

West End (formerly named *Carleton*), a busy but not especially attractive suburb, except for the view it commands of St. John, is most easily reached by steam-ferry (2 c.; Pl. C, D, 2), a trip which affords a good idea of the busy life of the *Harbour*. The salmon-weirs are a conspicuous feature at low water. A little above the ferry is *Navy Island* (Pl. C, 1, 2), 'opposite which' La Tour built his fort (p. 29).

On the highest point of West End is a *Martello Tower* (Pl. A, 3), constructed in the war of 1812, the view from which well repays the small trouble of reaching it. It contains a small collection of relics (open 10-12, 2-6, and 7-9; adm. 10 c). The walls are 6 ft. thick. Some of the West End Churches, such as the new R. C. Church of the Assumption (Pl. A, 3), are rather handsome buildings. A large *Grain Elevator* (Pl. C, 3), at the West End termination of the C.P.R., is a conspicuous object. About 1/2 M. to the S.W. of the Martello Tower is the *Bay Shore*, a bathing-beach and popular resort, with the new *Seaside Park* (beyond Pl. A, 1, 2) — On *Lancaster Heights*, beyond West End, is the *New Brunswick School for the Deaf* (1903), affording a good view of the city, harbour, and falls.

Last, but by no means least, among the lions of St. John are the famous **Falls of the River St. John** (Pl. A, 1), the chief characteristic of which is well denoted by the epithet 'reversible', applied to them by an American humorist. They are most directly reached by the electric cars which run along Douglas Ave. (Pl. B-D, 1). The best views of them are obtained from the *Suspension Bridge* (Pl. A, 1), which hangs directly over them, with a span of 640 ft and a height of 70 ft. above high-water, and from the large lumber and pulp mills on the bank.

The **River St. John**, which is at places 4-5 M wide (comp p 33), here makes its way into the sea through a channel only 450 ft. across, hemmed in by limestone cliffs 100 ft. high. At low tide the river falls about 15 ft. into the harbour, but the strong and impetuous Bay of Fundy tide, which here rises about 25 ft., counterbalances this fall at high water and, indeed, entirely 'reverses' it. At a little more than half-tide the river here is level and easily navigable.

The visitor who has sufficient time at his disposal is strongly advised to visit the Falls both at high and low water, in order to have ocular proof of this very remarkable phenomenon (time-cards obtained at the hotels).

Just above the Suspension Bridge is the fine *Cantilever Railway Bridge* of the C.P.R. (see p. 25), 120 ft. above low water. It cost \$600,000.

Just beyond the Suspension Bridge is the large building of the **Provincial Lunatic Asylum** (Pl. A, 1), which, with its farm-annex,

accommodates nearly 500 patients. — We may easily combine a visit to the Falls with that to West End, as the Lunatic Asylum is only about $\frac{3}{4}$ M. from the Martello Tower (see p. 32).

Adjoining Douglas Avenue (see p. 32) is the *Riverview Memorial Park* (Pl. B, C, 1), with a monument commemorative of the South African War (1899-1900).

Environs of St. John.

One of the favourite drives of the St. Johnians is the MARSH ROAD, beginning at the Marsh Bridge (p. 31) and following what is supposed to be an ancient channel of the St. John River. This road passes ($1\frac{1}{2}$ M.) the *Fern Hill Cemetery* and the ($1\frac{1}{2}$ M.) *Moosepath Racing Park* and may be followed along *Kennebecasis Bay* to (6 M.) *Rothsay* (p. 48) — The first road to the right beyond the Marsh Bridge leads to (2 M.) the *Roman Catholic Cemetery*, (1 M.) the *Silver Falls*, and (7 M.) *Loch Lomond (Ben Lomond House)*, which is much frequented for boating, fishing, and shooting. — *Rockwood Park*, about $1\frac{1}{2}$ M. from King Sq., viâ Mt. Pleasant (see p. 31), contains 12 M. of driveways, a public garden, a small zoological collection, and *Lily Lake*, a charming little boating and skating resort. — The SHORE ROAD to MISPEC diverges to the right from the Loch Lomond road, $\frac{1}{2}$ M. from the Marsh Bridge, and skirts *Courtenay Bay*, which at low-water is an expanse of dark sand. In about $\frac{3}{4}$ M. we pass the *Alms House*, opposite which are the large buildings of the *Reformatory & Industrial School*. *Mispec Point* is about 9 M. from the city, and the village of *Mispec*, with a large pulp-mill, is about 1 M. farther on — The MANOGANY ROAD (a corruption of the Indian *Manawagonish*), beginning beyond the Suspension Bridge (p. 32), runs through the village of *Fairville* (2000 inhab.) and thence to the S.W. to (7 M.) *Spruce Lake* (p. 42). It affords good views over the *Bay of Fundy* (p. 76).

From St. John to *Fredericton* and other points on the *St. John River* and its tributaries, see R. 11a; to *Fredericton* by railway, see R. 11b; to *Halifax* viâ the *Bay of Fundy*, see R. 20a; to *Halifax* by railway, see R. 20b; to *Moncton* and *Quebec*, see R. 17; to *Montreal*, see R. 16; to *St. Andrews* and *St. Stephen*, see R. 14; to *Campobello* and *Grand Manan* (by steamer viâ *Eastport*), see R. 15; to *Portland (Boston)* by railway see R. 8, to *Boston* by sea, see R. 7a.

11. From St. John to Fredericton.

a. By River.

84 M. STEAMER of the *Star Line* in 6-7 hrs., starting daily (except Sun.) from *Indiantown* (comp. Pl. D, 1) at 8.30 a.m. (fare \$1; meals 50 c.; return-tickets, available from Sat. to Mon., at a single fare; day return-ticket, available by C.P.R. train leaving *Fredericton* for *St. John* about 9 p.m., \$2). The 'Victoria' is the faster and better boat of the two engaged in the service. This is a pleasant trip for those who have time for it, especially when the banks glow with the rich colours of the autumn foliage. The words right (r.) and left (l.) are used in the following description in reference to persons ascending the river. Many of the intermediate landings are made by small boats. Some of the side-trips, such as those up the *Kennebecasis* and to *Grand Lake*, are also attractive. Full particulars as to the small steamers engaged in these services will be found in the daily papers.

The *St. John*, 450 M. in length and much the largest river in New Brunswick, rises in the great forests of the N. part of Maine and flows at first towards the N.E. and afterwards to the S.E. For about 70 M. it forms the boundary between Maine and New Brunswick. It is navigable for steamers of some size up to (84 M.) *Fredericton*, and for smaller vessels to *Woodstock*, 65 M. farther up, or even to *Grand Falls*, nearly 220 M. from the sea. 'It is noteworthy that, though the general course of the

St. John is nearly parallel to the line of the E coast of New Brunswick, it cuts across the principal lines of elevation and the usual N.E. and S.W. trend of the rocks of the province upon which the positions of these elevations depend' (*G. M. Dawson*). The St. John drains nearly half of the entire area of New Brunswick, besides a large tract of Maine. Among its chief tributaries are the *St. Francis*, the *Madawaska*, the *Aroostook*, the *Tobique*, the *Nashwaak*, the *Oromocto*, the *Washademoak*, the *Salmon*, and the *Kennebecasis*. A large part of its basin is covered with pine and other forest, and immense quantities of timber are floated down the river. It received its present name from De Monts in 1604 (comp. p. 28), the Indians called it *Ouygoudy* ('highway') or *Looshtook* ('long river').

St. John, see p. 27. In order to escape the *Falls* (p. 32), the steamers start at *Indiantown*, a suburb just above the *Suspension and Railway Bridges* (p. 32), reached by electric car (5 c.). As we leave we enjoy a fine retrospect of the city, with the bridges spanning the gorge through which the St. John forces its way to the harbour. The banks, at first, are high, steep, and picturesque, with numerous lumber-mills, limestone-quarries, and lime-kilns. Near the promontory named *Boar's Head* (r), about 3 M. from Indiantown, the river expands into *Grand Bay*, about 5 M. across, while behind (l.) lies *South Bay*, with its numerous saw-mills. To the right opens **Kennebecasis Bay*, the estuary of the *Kennebecasis River* (p. 48), with *Kennebecasis Island*.

This bay, which also receives the waters of the *Hammond River*, is 1-4 M. wide and navigable for large vessels for 20-25 M. It contains many islands and includes the famous St. John rowing-course (comp. p. 48).

Beyond Grand Bay the river again contracts. Its windings often close up the apparent channel and make it look like a series of lakes. The hills which enclose it are here about 200-400 ft. in height. The railway (p. 24) is seen to the left.

9 M. (l.) *Brundage's Point*, one of the landings for *Westfield*, a favourite little summer-resort at the mouth of the *Nerepis*, with a sandy beach. — The river here bends to the N.E. (r.), and we enter the so-called **Long Reach**, a straight stretch of the river, 16 M. long and 1-3 M. wide. To the left rises the ridge called the *Devil's Back*. River-craft of various kinds are met here, including small tug-steamers drawing enormous timber-rafts.

10 M. (l.) *Woodman's*. — 11 M. (l.) *Nat. Belyea's*, with a light-house. — 12 M. (r.) *Carter's*. — 17 M. (l.) *Pitt's Landing*. — 17½ M. (r.) *Laskie's Landing*. — 20 M. *Brown's Flat* (l.), with summer cottages. — 20½ M. *Pugsley's Island*. — 22 M. (r.) *Cedars* (Cedars, \$2-2½). — 25 M. (l.) *Oak Point*, a pretty little hamlet with a light-house and church. Numerous islands stud the river here.

Just beyond *Oak Point*, to the left, is a long narrow peninsula named *The Mistake*, so called because the inlet between it and the W. bank is apt to be taken for one of the channels of the river.

26 M. (r.) *Sterritt's*, at the mouth of *Kingston Creek*, an arm of **Belleisle Bay** (14 M. long and 1 M. wide), which here opens to the right.

29 M. (r.) *Palmer's Point*. — The river now bends again to the N.W. (l.).

30 M. (l.) *Evandale* (Vanwart's Hotel, \$1½). — 30½ M. (r.) *David Vanwart's*. — 31 M. *John Allen's*, at the foot of *Spoon Island*. On the mainland at this point are some famous granite-quarries. — 32 M. (r.) *Black's* — 33½ M. *Case's*, near the head of *Spoon Island*. — 34 M. (l.) *Hampstead* (Vanwart's Hotel, \$1½), nearly opposite the end of *Long Island*, a fertile hay-growing strip, 6 M. long, with fine elms and two ponds. — 34 M. (r.) *Wickham*.

About 2 M. above this, to the right, partly concealed by *Little Musquash Island*, is the mouth of *Washademoak Lake*.

Washademoak Lake, really an expansion of the river of that name, 25 M. long and ½-2 M. wide, is visited more or less regularly by a small steamer from St John, but offers few inducements to the tourist.

40 M. (l.) *Otnabog*, at the outlet of the lake of the same name, nearly opposite the upper end of *Long Island*. — 42 M. (l.) *McAlpine's* (*Halfway Clump*), opposite *Upper Musquash Island*. — 47 M. (r.) *Buzza's* or *Scovil's Point* (lighthouse). — 50 M. (l.) *Gagetown*, (*Simpson's*, \$2), behind the peninsula of *Grimross Neck*, is the principal place on the river between St. John and Fredericton (pop. 925). It is shire-town of Queen's Co., is beautifully situated, and has several churches and public buildings.

To the right, at this point, on the other side of the peninsula, is the mouth of the *Jemseg River*, the outlet of *Grand Lake* (see below).

A small steamer plies regularly from St. John to Grand Lake (see daily papers). After quitting the St. John River, it ascends the slow and winding *Jemseg*, the mouth of which was once guarded by a strong fort erected by the French in 1640. Half-a-century later *M de Villebon*, Governor of Acadia, made his headquarters here, an honour that was transferred to *Nashwaak* (Fredericton) soon after. — *Grand Lake*, which is 30 M. long and 3-9 M. wide, is surrounded by a farming and coal-mining country. The usual terminus of the steamer is *Chipman*, about 10 M. up the *Salmon River*, which flows into the N. end of the lake.

The hills bordering the St. John now disappear, and the rest of the trip passes through a fertile 'intervale' district, overflowed by the spring freshets. The river bends to the left. 53 M. (l.) *Grimross Canal*. — 56 M. (l.) *Gunter's*. — 60 M. *Upper Gagetown*, with a pier.

Opposite *Gilbert's* or *Maugerville Island* we call at (64 M.) *Sheffield* (r.), with its quaint church, and at (66 M.) *Sheffield Academy*, with the building formerly used as a school. The river here flows nearly E. and W. To the left we have a charming view of (68 M.) *Burton*, with its church-spire rising from a sea of green foliage. Opposite (r.) lies *Upper Sheffield*. — We now pass *Middle Island* and reach (71 M.; r.) *Maugerville*, the first English settlement in New Brunswick (1763). In 1776 the majority of the inhabitants declared in favour of the Colonies and against Great Britain — a declaration that entailed no serious consequences, even to themselves!

73 M. (l.) *Oromocto* (Riverside Hotel, \$1½), an attractive village with a good wharf, at the mouth of the *Oromocto*, in which trout and pickerel may be caught. A fort for protection against the Indians was erected here. Opposite lies *Oromocto Island*.

From about this point all the way to Fredericton the river is lined with timber-booms, anchored by stone-filled piers. The 'shear-booms', attached to the main booms, are for catching passing logs. Lumbermen are seen at work in all directions, and tiny tug-boats are hauling log-rafts. Indians in birch-bark canoes may be encountered here, if not lower down.

75 M. (r.) *Upper Maugerville*. — 79 M. (l.) *Glazier's*.

The first part of Fredericton to come in sight is the University, on the hills to the left. Then the Cathedral spires and the dome of the Parliament Buildings are seen over a low point to the right. About 1 M. before reaching the city we pass a busy saw-mill on the left. Finally we pass through the 'draw' of the fine *Railway Bridge* and moor at the wharf to the left, between the bridges. On the opposite bank (r.) lie *Gibson* and *St. Mary's* (see p. 38). The hotels, which are within a few hundred yards of the wharf, send carriages to meet the steamer (no charge).

84 M. (l.) **Fredericton** (*Barker House, Queen, \$2-31/2; Windsor, \$2-21/2; cab 25 c. per drive within the city, U.S. Agent*), the capital of New Brunswick, is a very attractive little city of (1904) 7117 inhab., pleasantly situated on the right bank of the St. John, with wide elm-shaded streets, good shops, and many handsome buildings. The five main streets, running parallel with the river — *Queen, King, Brunswick, George, and Charlotte* — were laid out in 1785 and were named by Governor Carleton in honour of the reigning family of Great Britain. Two new streets (*Saunders* and *Aberdeen*) have since been added. The main *raison d'être* of the city is the presence of the Provincial Government Offices, but it also carries on a few manufactures and a large lumber-trade, while it is the distributing point for the surrounding country. It is an important centre for the sportsman (see p. 38). Fredericton is the seat of a cavalry-school and of a company of active militia. The river, here 3/4 M. wide, is crossed by a railway-bridge (p. 89) and by another for carriages and foot-passengers.

In 1692 *Governor Villebon* (p. 35) transferred his headquarters from Jemseg to the mouth of the *Nashuaak* (p. 38), opposite Fredericton, in order to be nearer his Malicete allies, and built here a strong fort and stockade, which successfully resisted an attack by the New Englanders in 1696. In 1698, however, the garrison was removed to the fort at the mouth of the river St. John (p. 29), and in 1700 Fort Nashuaak was destroyed and abandoned. The village at *St. Anne's Point*, on the opposite bank, was founded about 1740, and in 1757 it received many Acadian refugees from Nova Scotia. When the British took possession of New Brunswick (see p. 37), the name of St. Anne was changed to *Fredericton* by Governor Carleton in 1785, and in 1787 it was made the capital of the province, partly because St. John was considered too open to attack, but chiefly to encourage the settlement of the lands in the centre of the Province.

The **Province of New Brunswick**, of which Fredericton is the capital, is about 200 M. long from N. to S. and 160 M. wide from E. to W. Its area, 27,500 sq. M., is a little less than that of Scotland. On the N. it is bounded by the Province of Quebec, on the W. by the State of Maine, on the S. by the Bay of Fundy, and on the E. by the Gulf of St. Lawrence,

while at its S. E. angle it connects with Nova Scotia by the narrow Isthmus of Chignecto (see p. 86). It has a coast-line of about 500 M., with numerous bays and excellent harbours. The chief rivers are the *St John* (p. 33), the *Miramichi* (p. 88), and the *Restigouche* (p. 90). The surface consists mainly of undulating plains and hills, with no mountain-ranges properly so called, and much of it is still covered with forest. Perhaps two-thirds of it are available for agriculture, but so far only about one-tenth has been cleared and occupied. All the ordinary British cereals and roots are successfully grown. Along with agriculture, fishing and lumbering are the chief pursuits of the inhabitants, of whom there were 321,263 in 1891 and 331,120 in 1901. The fisheries employ 10,000 men and are surpassed in value by those of Nova Scotia and British Columbia only. The mineral resources include coal, iron, gypsum, copper, and manganese. About one-third of the population is of English origin, one-third Irish, one-sixth French, nearly one-sixth Scottish. The Indians number about 1400. — New Brunswick was included in the grant of 'Acadia' made to De Monts in 1603 (comp. p. 53), but in 1713 the French tried to restrict this name to Nova Scotia, and it was not till 1763 that New Brunswick became an undisputed part of the British Empire (comp. p. 86). Many of the Nova Scotia Acadians took refuge in New Brunswick in 1755 (see p. 95). New Brunswick was made a separate province in 1784 (p. 53) and joined the Dominion of Canada in 1867. — New Brunswick offers some of the best fishing and shooting in Canada (comp. pp. 36, 38, 1).

The chief street, with the best shops and many public buildings, is QUEEN STREET, running along the water-front for $1\frac{1}{2}$ M. Following it to the left (S. E.) on coming from the steamboat-wharf, we pass the *Queen Hotel* (r.) and *Court House* (l.) and reach the **Parliament Building**, a handsome stone structure, with a Corinthian portico, small dome, and mansard corner-towers. The adjacent building of purplish sandstone contains the *Departmental Offices*.

The *Assembly Hall*, on the ground-floor to the right on entering, contains portraits of George III. and Queen Charlotte, the Earl of Sheffield, etc. The Legislature, which consists of 46 members, including the Speaker, generally meets in February. — The *Supreme Court*, to the left, contains portraits of the Chief Justices of New Brunswick. — The *Hall of the Legislative Council*, upstairs, became the Supreme Court Room when New Brunswick declared for a single legislative chamber. — The *Library*, at the back of the main building, contains a set of the plates of *Audubon's 'Birds'* and other valuable works. — An excellent *View is obtained from the *Dome*.

In the *Crown Land Office*, in the Departmental Building, is a copy of the 'Atlantic Neptune', published for the use of the British Navy in 1770.

A little way beyond the Parliament Building, in a pretty wooded 'close', stands ***Christ Church Cathedral**, a small but beautiful Dec. Gothic building of grey stone, with a spire 180 ft. high. It was built in 1849, through the exertions and largely at the expense of *Bishop Medley* (d. 1892), who is buried to the E. of the choir.

The *Interior, with its shallow transepts and spacious choir, is simply but tastefully adorned and makes a pleasing impression. The *Stained Glass Window* at the E end was a gift of the Episcopalians of the United States. Behind the organ is a tablet to *Major-General Smyth* (d. 1823), Lieutenant-Governor of New Brunswick. — Services on Sun at 8, 11, and 7, holy days at 11 a.m.; week-days at 9 a.m. and 5 p.m.

If we turn to the right (N. W.) on reaching Queen St. from the wharf, we pass (right) the *Officers' Square*, with its green lawns, the *Officers' Quarters*, the *Post Office*, the *Barracks*, the *Normal School*, and the *City Hall*. Farther on, in the same direction, we pass the wooden *Victoria Hospital*, an institution due to the activity

of Lady Tilley, and reach *Government House*, formerly the residence of the Lieutenant-Governor. Opposite lies *Wilmot Park*, presented and endowed by Mr. E. H. Wilmot. About $1\frac{1}{2}$ M. farther out is the *Hermitage*, formerly the residence of the *Hon Thos. Baillie*; the mansion was burned down some time ago, and the attractive grounds have been secured as the site of a Roman Catholic institution.

Drivers may follow this pleasant road along the river to (4 M.) the village of *Springhill* (p. 39).

At the back of Fredericton rises a series of wooded heights, on the southernmost of which, $11\frac{1}{2}$ M. from the centre of the city, stands the **University of New Brunswick**, a substantial stone building dating from 1828 (140 students). It should be visited for the sake of the 'View from the cupola. It has an excellent geological museum.

Other noticeable buildings are the *Presbyterian* and *Methodist Churches* and the little Anglican *Christ Church* (formerly *St. Ann's*).

No visitor should omit to cross the river by the road-bridge (p. 36), which begins behind the Post Office and leads to the village of *St. Mary's*, below the mouth of the *Nashwaaksis* ('little Nashwaak'). It is adjoined by a small settlement of Malicete Indians, whose services as canoe-men and guides are in demand among sportsmen [The white guides, of whom a list is published by the New Brunswick Tourist Association, are considered the best, while the Micmac Indians, on the N shore, are also good.] To the S of *St. Mary's*, at the mouth of the *Nashwaak*, lies *Gibson*, a lumbering village with about 1000 inhabitants. A drive hence up the *Nashwaak* leads to (3 M.) the model town of *Marysville*, the seat of the large lumber-mills of *Mr Alexander Gibson*, the 'Lumber King of New Brunswick', who employs altogether about 2000 men. The points of interest here include the *Saw Mills*, a large *Cotton Mill*, the rows of neat little houses of the employees, and the somewhat fantastic octagonal *Church*. — *Gibson* and *Marysville* are stations on the *Fredericton Section* of the *Intercolonial Railway* (see p. 89), and *Gibson* is also on the C.P.R. line to *Woodstock* (see p. 39).

A favourite drive leads along the S.W. side of the river past *Kingsclear* (p. 39), crosses the river at (9 M.) *Crock's Point*, and returns down the E. bank via *Keswick*, *Douglas*, *Nashwaaksis*, and *St. Mary's*.

A delightful canoe-trip may be taken up the *Nashwaaksis* (see above) to (12 M.) its pretty *Falls*.

Fredericton is a good starting-point for caribou-shooting, the best season for which is in December, after the first snow. Guides, equipments, and camp-supplies are easily obtainable here. Good fishing of various kinds is also accessible hence. Information may be obtained on application to *Mr. L. B. Knight*, Chief Game Commissioner for the Province of New Brunswick, or from *Mr. R. P. Allen*, of the N. B. Guide Association.

From Fredericton to *Chatham* (Fredericton Section of Intercolonial Railway), see p. 89; to *Woodstock*, see R. 12.

b. By Railway.

67 M. CANADIAN PACIFIC RAILWAY in $2-2\frac{1}{2}$ hrs (fare \$2).

From *St John* to (45 M.) *Fredericton Junction*, see p. 25. Our line here diverges to the right (N.) and runs through a wooded district, at some distance to the W. of the *River Oromocto* (p. 35). None of the intermediate stations are important. 53 M. *Rusagornis*, 57 M. *Waasis*; 61 M. *Glasier*; 63 M. *Doak*; 64 M. *Victoria*; 66 M. *Salamanca*.

67 M. *Fredericton*, see p. 36. The *Union Railway Station* lies at the E. end of the city.

12. From Fredericton to Woodstock.

a. By Railway.

65 M. CANADIAN PACIFIC RAILWAY in $4\frac{1}{4}$ hrs. (fare \$2 10).

Fredericton, see p. 36. The train crosses the *St John* by a fine cantilever steel bridge (view), $\frac{3}{4}$ M. long, to (2 M.) *Gibson* (p. 38). It then turns to the left (W.), passes (3 M.) *St. Mary's*, and crosses the *Nashwaaksis* (p. 38) at (4 M.) *Douglas*. Fine views of the *St. John* are enjoyed to the left, *Springhill* (see below) is visible on the opposite shore. At (14 M.) *Keswick* we turn to the right, quit the *St. John*, and ascend the left bank of the *Keswick*. Some pleasant bits of scenery are passed at first, but farther up the valley is dreary and unattractive. The line gradually bends round to the W., crossing and recrossing the stream. 18 M. *Cardigan*; 22 M. *Zealand*; 31 M. *Upper Keswick*, 41 M. *Mulville*; 43 M. *Woodstock Road*; 45 M. *Nackawic*; 54 M. *Shewan*. At (59 M.) *Newburg Junction* (Rail. Restaurant) we join the line from *Woodstock* to *Edmundston* (see R. 13) and follow it towards the S., with the *St. John River* to the right. Beyond (62 M.) *Upper Woodstock* we cross the *St. John* by a long wooden bridge and reach —

65 M. **Woodstock** (see p. 40).

b. By River.

In spring and autumn, when the water is high enough to permit it, a 'stern-wheel' steamer plies up the *St. John* to *Woodstock* (64 M.; fare \$1 50, meals 40 c.) The scenery is attractive.

Fredericton, see p. 36. The steamer at first runs towards the W., passing (5 M.; l.) *Springhill*, *Sugar Island* (r.), and (9 M.; l.) *Lower French Village*, an Acadian settlement opposite the mouth of the *Keswick* (see above). The river then turns to the S.W.

17 M. *Upper Kingsclear*. — 20 M. (r.) *Lower Queensbury* The river here turns again to the N.W. — 22 M. (l.) *Lower Prince William*. — 23 M. *Bear Island*. — 25 M. (l.) *Prince William*.

30 M. (r.) *Upper Queensbury*. The river bends to the right.

40 M. (l.) *Pokiok*, picturesquely situated at the mouth of the river of that name, the outlet of *Lake George*. In descending to the *St. John* this stream forms a fall 40 ft. high and cuts its way through a narrow gorge $\frac{1}{4}$ M. long. — The *St. John* once more turns to the W.

44 M. *Meductic Rapids*, which in low water the steamer ascends with some difficulty.

45 M. (l.) *Lower Canterbury*, near the mouth of the *Sheogomoc River*. — 47 M. (r.) *Southampton*. — 51 M. (l.) *Upper Canterbury*, at the mouth of *Eel River*.

About 4 M. farther on, beyond (55 M.; r.) *Northampton*, is the site of the old *Meductic* fort and Indian village (l.), which have existed from time immemorial and were described by English and French writers more than two centuries ago. The river here flows almost N. and S.

57 M. (1.) *Lower Woodstock.*

64 M. (1.) **Woodstock** (*Carlisle*, \$2-2½, *Aberdeen*, \$1½; U S. Consul, *Mr. Frank C. Denison*), a town of (1901) 3644 inhab., pleasantly situated on a high bluff, at the confluence of the St. John and the *Meduxnekeag*, is the centre of a thriving agricultural district. It also possesses saw-mills, foundries, and factories, but the adjacent iron-mines are no longer worked. The drives in the vicinity of the town are picturesque and the roads excellent. A handsome iron bridge with stone piers spans the river to *Grafton*, on the E. side.

From Woodstock to *McAdam Junction*, see p 25; to *Grand Falls* and *Edmundston*, see R. 13.

13. From Woodstock to Grand Falls and Edmundston.

112 M CANADIAN PACIFIC RAILWAY in 6½ hrs (fare \$3.50). This line runs through a picturesque district, and the Grand Falls are well worth seeing.

From Woodstock to (5 M.) *Newburg Junction*, see p 39. Our line now runs to the N., hugging the E bank of the *St. John* (views to the left). 12 M. *Hartland*, 16 M. *Peel*. — 23 M. *Florenceville*; the prettily situated village is on the opposite side of the river. About 6 M. to the S.W. rises *Mars Hill* (1200 ft.). — The scenery improves. 26 M. *Bristol* is only 15 M. by road from the upper waters of the main arm of the *Miramichi* (see p. 88). At (40 M) *Muniac* we cross the stream of that name. — From (48 M) *Perth* the *Tobique Valley Railway* runs to (28 M, fare 95 c) *Plaster Rock*, with its rich deposits of gypsum. There is some talk of extending this line to *Riley Brook*. — The train now crosses the St. John to (49 M.) *Andover* (*Perley's Inn*, \$1½-2), a village of about 700 inhab., forming the headquarters of the anglers of the Tobique district.

About 1 M. above Andover, on the opposite side of the St. John, is the mouth of the *Tobique, a famous stream for salmon, trout, and scenery. Guides (\$1-1½ per day) and canoes may be obtained in the Malicete village at the mouth of the river or by consulting the list of white guides prepared by the New Brunswick Tourist Association (better). The enthusiastic angler may push his way up to *Nictor* or *Nictau Lake*, at the headwaters of the Tobique (a week's journey), whence a portage of 3 M will bring him to the headwaters of the *Nipisigunt* (p 89). Thence he may paddle in 5-6 days to the *Great Falls of the Nipisigunt*, 20 M. from *Bathurst* (comp p 89). Near Nictor Lake is *Bald Mt.* (2500 ft), the highest point in New Brunswick.

Near *Johnville*, not far from Andover, a cave was discovered in 1906, containing human bones and relics of the 17-18th centuries.

From (54 M.) *Aroostook Junction* a branch-line runs up the valley of the *Aroostook* to (7 M.) *Fort Fairfield*, (19 M.) *Caribou*, and (34 M.) *Presque Isle*, three small towns in Maine (2-3000 inhab.).

The so-called '*Aroostook War*', in 1839, arose from disputes about the boundary between New Brunswick and Maine, but did not pass beyond the stage of 'mobilisation of forces' on both sides. The ensuing diplomacy adjudged the Aroostook Valley, which had been largely settled by New Brunswickers, to the United States. The valley affords excellent fishing and also bear, moose, caribou, deer, and duck shooting. The name will be familiar to all admirers of *Howells'* '*Lady of the Aroostook*'.

The line crosses the Aroostook and continues to follow the St. John, which now flows to our right — 73 M. **Grand Falls** (*Ourless*,

well spoken of, \$2), a small town with 1900 inhab., attracts a number of summer-visitors by its fine scenery, beautiful woods, and cool climate. The town, through which runs a wide grassy avenue named *Broadway*, occupies a high plateau surrounded on three sides by the river and on the fourth by a ravine. Partridge and duck shooting are popular in autumn.

Opposite the town are the "Grand Falls of the St. John, where the river suddenly contracts and plunges into a rocky gorge from a height of 74 ft. These falls rank with the finest on the continent in everything but size, and their environment is very impressive. A good distant view of them is obtained from the *Suspension Bridge*, which crosses the river about 200 yds. below, while a nearer view is obtained from the old mill or by descending the steep steps to the bottom of the ravine. — The ravine is about $\frac{3}{4}$ M. long and 250 ft. wide, while its sides of dark calcareous slate rise precipitously to a height of 100-250 ft. It contains several lesser falls and rapids, with a total descent of 50 ft. more. Among the subordinate points of interest in it are the *Cave*, the *Coffee Mill*, and the *Wells*. The visitor should try to see the falls when lumber is passing over them. — A romantic Indian tradition (not, however, by any means confined to this district) narrates that an invading party of Mohawks captured two Malicete squaws, whom they forced to act as their pilots down the river. The women assured them that the stream was free from falls or rapids and that the noise they heard was that of a tributary stream. The Mohawks consequently did not realise their danger till too late, and their canoes were all swept over the falls — the heroines losing their own lives but saving their village from destruction.

The railway crosses to the left (E.) bank of the river a little above the falls and continues its course towards the N.W. (views to the left). The river now forms the boundary between New Brunswick and Maine, and we soon reach the Acadian district mentioned at p. 95. — 86 M. *St. Leonard's*. — 90 M. *Grand River* lies at the mouth of the river of that name.

This forms the beginning of a canoe and portage route to the headwaters of the *Restigouche* (p. 90), which are within about 15 M. of this part of the St. John. Guides and canoes are generally brought from the Malicete settlements at the mouth of the Tobique (p. 40) but may also be obtained at one of the Acadian villages (best guides those named in the list of the N.B. Tourist Association).

102 M. *Green River*; 106 M. *St. Basil*, with a large Roman Catholic church and convent. — The train continues to hug the river, which here sweeps round to the W., and soon reaches —

112 M. *Edmundston* (see p. 95). Route hence via *Lake Temiscouata* to *Rivière du Loup* (in the reverse direction), see p. 95.

14. From St. John to St. Stephen and St. Andrews.

a. By Railway.

St. Stephen is reached by the NEW BRUNSWICK SOUTHERN RAILWAY (82 M.) in $4\frac{1}{2}$ hrs. (fare \$1.75) or by the CANADIAN PACIFIC RAILWAY via McAdam Junction in 4 hrs. *St. Andrews* is reached by the C. P. R. via McAdam Junction (comp. p. 25) in $4\frac{1}{4}$ hrs. (fare \$2.60).

In fine weather the steamboat voyage (R. 14b) is preferable to the railway.

St. John, see p. 27. The train of the *Shore Line* starts from *West End Ferry* (p. 32), on the W. side of the harbour, and runs

to the W., following the general line of the coast but affording comparatively few views of the *Bay of Fundy* (p. 23). — 8 M. *Spruce Lake* (p. 33); 17 M. *Musquash*, a village with (1901) 741 inhab., at the head of a small harbour; 24 M. *Lepreaux*, at the head of *Mace's Bay*. *Point Lepreaux*, 7 M. to the S., is provided with a lighthouse. At *Beaver Harbor*, 5 M. from (38 M.) *Pennfield*, is the *Paul Hotel* (well spoken of), frequented for shooting and fishing. — 47 M. *St. George* (*Arden*, \$1 $\frac{1}{4}$; U.S. Agent), a small seaport, with (1901) 2892 inhab., at the mouth of the *Magaguadavic* (locally pronounced 'Magadavy'), which is here compressed into a chasm 30 ft. wide and plunges into the harbour from a height of 50 ft. *St. George* exports lumber and fine red granite, quarried in the neighbourhood. Good trout-fishing is obtained in *Lake Utopia*, 1 M. to the N. — 53 M. *Bonny River* (Sullivan, \$1 $\frac{1}{2}$), a good trout-fishing centre; 62 M. *Dyer's*.

At (68 M.) *St. Andrews Crossing* we intersect the C.P.R. line from *McAdam Junction* to *St. Andrews*. The distance to the latter place, which is described below, is 17 M.

We now pass (77 M.) *Oak Bay*, at the head of the inlet of the *St. Croix River* so called (see p. 43), and soon reach —

82 M. *St. Stephen* (see p. 43).

b. By Steamer.

A steamer of the Eastern S S Co. plies thrice weekly in summer from *St. John* to *Eastport*, where it connects with steamers for *St. Andrews* (through-fare \$1.30) and *Catais* (for *St. Stephen*; \$1.50, 5 hrs. in all). See daily papers or enquire at the steamboat-office.

St. John, see p. 27. On leaving the harbour, the steamer runs well out into the *Bay of Fundy* (p. 23) and steers a little to the S. of W. Beyond *Split Rock Point* opens *Musquash Harbour* (see above), and farther on is *Point Lepreaux* (see above), with its double light and steam-foghorn. We then cross the wide entrance of *Mace's Bay* (see above), leaving *Deer Island* (p. 22) to the right.

At *Eastport* (see p. 22) we change to a steamer of the Frontier Steamboat Co., which steers to the N., passing between *Moose Island* and *Deer Island* (see above), and beyond *Pleasant Point* (1), the chief settlement of the Passamaquoddy Indians, enters *Passamaquoddy Bay*. Beyond *Navy Island* we enter the *St. Croix River*.

St. Andrews (*Algonquin*, a large summer-hotel, \$3-5; *Kennedy's*, \$2, *Central Exchange*, \$2, U.S. Agent, *Mr. G. H. Stickney*), a seaport and summer-resort, with about 1390 inhab., is finely situated on a peninsula between *Passamaquoddy Bay* and the *St. Croix River*, here 2 M. wide and separating *New Brunswick* from *Maine*. The town lies on a gentle slope, rising to a height of 150 ft., while a little farther back the hills are 100 ft. higher. Its attractions include good sea-bathing and boating, golf-links, a summer climate cool and comparatively free from fog, sea and fresh-water fishing, lobster-

spearfishing, and fair roads for riding or driving. It is frequented by many visitors from both Canada and the United States. A fine boating and bathing lake has been formed by a dam at *Katie's Cove*.

St. Andrews, which was founded about 1783, has a good harbour and formerly carried on a brisk trade with the West Indies.

One of the chief points of interest near St. Andrews is the *Chamcook Mt.*, 4 M. to the N., the base of which may be reached by road or railway. The top commands a fine view of *Passamaquoddy Bay* — Excursions may also be made to *Doucet's Island* (see below) and to the little American village of *Robbinston*, on the opposite side of the St. Croix — Longer trips may be made to *Eastport* (steamer daily in summer), *Campobello* (p. 44), and *Grand Manan* (p. 45). — From St. Andrews to *McAdam Junction*, see p. 42.

The sail up the **St. Croix River** from St. Andrews to St. Stephen (17 M.) is interesting and picturesque. To the left is seen the village of *Robbinston* (see above); to the right rises *Chamcook Mt.* (see above). About 5½ M. above St. Andrews we pass (left) *Doucet's Island*, the site of the first settlement in Acadia.

In 1604 the *Sieur de Monts*, to whom Henry IV. had made a grant of Acadia, arrived in the St. Croix River at the head of an expedition which included *Champlain* among its members and fixed upon the grassy *Isle St. Croix* (now *Doucet's Island*) as the site of his settlement. A group of wooden dwellings, defended by two batteries, was erected, and grain and vegetables were planted. The crops, however, failed to ripen, and the extreme cold of the winter was more than the ill-fed and ill-housed Frenchmen could stand. Scurvy broke out and carried off nearly half of the 80 settlers. When a supply-ship arrived in June, 1605, the island was abandoned, and the unfortunate colonists took refuge in Port Royal (p. 75). The only present inhabitants of the island are the keepers of the lighthouse.

In 1783, when it was agreed that the St. Croix should be the boundary between New Brunswick and the United States, the latter country claimed that the *Magaguadavic* (p. 42) was the stream in question. The discovery of some remains of the settlement of De Monts, however, settled the matter beyond dispute.

About 4½ M. farther up, the river bends to the left (W.), while *Oak Bay* opens out to the N., in the direction we have been moving in. It has been supposed that the arrangement of the river and its arms here suggested the name 'Croix'. To the left rises the *Devil's Head* (a corruption of *Duval's* or *D'Orville's*). In 2½ M. more we pass the fishing-village named *The Ledge*, and 4 M. beyond this lies —

St. Stephen (*Windsor, Queen*, \$ 2; U.S. Consul, *Mr C. A. McCullough*), a busy little town with (1901) 2840 inhab., at the head of navigation on the St. Croix. Its chief activity is in shipping lumber, but it also carries on a general trade and has a few manufacturing. About 2 M. above St. Stephen is the sister-town of *Milltown* (2044 inhab. in 1901), and on the opposite shore of the river (bridge) is the American town of *Calais* (American House, Border City, St. Croix Exchange, \$ 2), with (1900) 7655 inhab. and similar interests to those of St. Stephen. The cemetery of St. Stephen is shaded by fine white pines, many of which are remarkable for their curious form.

From St. Stephen to *McAdam Junction*, see p. 25 — Steamers ply regularly in summer from St. Stephen to *St Andrews* (p. 42) *Eastport* (p. 22), *Campobello* (p. 44), and *Grand Manan* (p. 45).

15. Campobello and Grand Manan.

These two islands are conveniently treated of together, as they are both reached via *Eastport* (p. 22), the routes to which town are indicated at pp. 22, 42.

a. Campobello.

Small steamers ply from Eastport to (2½ M.) *Campobello* at frequent intervals (½ hr.; fare 25c), while the Grand Manan steamers (p. 45) also touch at Campobello. Tickets are issued to Campobello from all important points, and baggage may be checked through. The ferry-steamers connect with all passenger-steamers calling at Eastport.

Campobello (*Tyn-o-Coed Hotel*, with its annex the *Tyn-o-Maes*, \$3½-5, *Owen Hotel*, \$2-2½, *U. S. Agent*), an island 9-10 M. long and 2-3 M. wide, lies between *Passamaquoddy Bay* and the *Bay of Fundy*, just on the Canadian (New Brunswick) side of the international boundary. It is irregular in shape, and its shores abound in picturesque cliffs, chasms, fjords, and beaches. The interior is covered with a dense growth of firs and larches, affording a pleasant shade for the numerous walks and drives that have been made through it in all directions. The climate is cool in summer, ranging from 50° to 75° Fahr. From 1767 to 1880 the island belonged to *Admiral William Owen* and his descendants, but in the latter year it was purchased by a syndicate of New Yorkers and Bostonians, who have spent large sums on its development, and it has lately become a favourite summer-resort. There is a golf-course. In 1901 the number of resident inhabitants was about 1200.

Excursions. To *Herring Cove Beach*, 1¾ M. The shady road crosses *Lake Glen Severn* by a bridge 600 ft. long. The crescent-shaped beach is 3 M. long. We may return from its farther end by the *Herring Cove* road, or by a bridle-path diverging to the left from that road and traversing the wood. — To **Head Harbor*, 10 M. The road leads partly along the coast and partly through the well-wooded interior. It passes the famous *Cold Spring*, with a uniform temperature of 44°, and *Bunker Hill* (300 ft.), the top of which, reached by a bridle-path, affords a *View of Grand Manan, the *Wolves*, and (on very clear days, with a telescope) *Nova Scotia*. A détour may be made from this road to (2 M.) **Schooner Cove*, whence a path (good for ¾ M., when the Head comes in sight; difficult trail thence) leads to (2 M.) *Nancy Head*, a fine cliff, 210 ft. high, with a pretty beach at its foot. Following the *Head Harbor* road a little farther, we may diverge to the right to *Mill Cove*. (If we include this point, it is wise to bring luncheon and devote the whole day to the excursion.) — *Nine Mile Drive* (3 hrs.) We follow the *Glen Severn* road for 1 M. and then the *Raccoon Beach* road to the (1½ M.) *Raccoon Beach*, whence we may visit the wild *Southern Head* on foot (5 min.). Returning to the road, we follow it to the right for 5 M. and return by either the *Fitzwilliam Road* or the *Narrows Road*. — To **Man-of-War Head* (3¼ M.; fine views) We proceed through *Welchpool*, the largest hamlet on the island, and then bear to the right over the *North Road*. The head is a high rocky bluff at the entrance of *Harbor de Lute*, commanding a good view. — To *Eastern Head*. From the end of the *Herring Cove* road we descend rapidly to the left and cross a beach. A few minutes farther on we follow a path to the right which leads to (20 min.) the summit (300 ft.; *View) — Other points of interest are **Friar's Head*, *Robinson's Ravine*, *Jacob's Ladder*, *Meadow Brook Cove*, etc.

EXCURSIONS BY WATER may be made to *Dennysville*, *Calais* (p. 43), *St Andrews* (p. 42), up the *Magaguadavic River* to *St. George* (p. 42), *Grand Manan* (see below), *St. John* (p. 27), and *Mt Desert* (see *Baedeker's United States*).

Sailing, Rowing, and Canoeing are safe (though some knowledge of the tides is desirable), and the *Fishing* is excellent

b. Grand Manan.

A steamer of the *Grand Manan Steamboat Co* runs four times weekly in summer (twice in winter) from *Eastport* (p. 22), touching at *Campobello* (p. 44), to (12 M.) *North Head*, on the island of *Grand Manan* (2 hrs.; fare \$1) A weekly steamer also plies from *St. John* (p. 27) to *Grand Manan* via *Eastport* and *Campobello*.

Grand Manan (accent on second syllable; U.S. Agent, *Mr. W. A. Fraser*), an island belonging to New Brunswick but lying about 8 M. from the coast of Maine, near the entrance to *Passamaquoddy Bay* (p. 22), is 22 M. long and 3-8 M. wide and in 1901 contained 2671 inhabitants. It possesses some of the finest cliff-scenery in America, while its cool (though somewhat foggy) climate and its fishing are additional attractions to summer-visitors. The island is traversed from end to end by an excellent road. The main occupation of the people is the cod, haddock, pollock, halibut, and herring fisheries.

North Head, the chief village and harbour of the island, lies on *Flagg's Cove*, near the N. end of the E. side. In the vicinity is the *Marathon House* (\$ 1½), the chief hotel on the island.

Following the road to the N., we pass *Sprague's Cove* or *Pettes's Cove*, below *Swallowtail Head*, and (2½ M.) *Whale Cove*, with a beach where porphyry, agates, and jasper may be picked up (fine views). A little farther on is the *Old Bishop* or *Bishop's Head*, the N. extremity of the island.

The finest cliffs are at the S. end of the island. The road to them from *Flagg's Cove* follows the shore more or less closely to *Castalia*, *Woodward's Cove*, and (5 M.) *Grand Harbor*, the last a place of considerable trade. It then leaves the sea for a time, but regains it at (5½ M.) *Seal Cove*, the first place settled in the island, whence it is continued to (4 M.) *Deep Cove*. From this point roads lead to (1½ M.) **South West Head* (lighthouse), where the cliffs rise to a height of 300-400 ft., and to (2 M.) the *Southern Cross*.

The W. coast of the island consists of an almost unbroken range of cliffs, 200-400 ft. high. A road crosses the island from *Castalia* (see above) to **Dark Harbor*, near which is *Money Cove*, where Capt. Kidd is fabled to have deposited some of his treasure. A little to the N. is *Indian Beach*, where a number of Quoddy Indians pass the summer engaged in the porpoise-fishery.

A number of small islands fringe the E. coast of *Grand Manan*, while a little to the S. of it are *Gannet Rock* (the scene of many terrible shipwrecks) and the *Seal Islands*, each with a lighthouse.

16. From St. John to Montreal.

483 M. CANADIAN PACIFIC RAILWAY ('Short Line') in 15½ hrs (fare \$14.40; sleeper \$2.50) This line traverses a good sporting district.

From *St. John* to (147 M.) *Mattawamkeag* (see below), see R. 8. The Maine Central R.R. to Bangor and Boston here diverges to the left. — 154 M. *Chester*, 168 M. *Seboois*, 180 M. *Lake View*. At (190 M.) *Brownville Junction* we cross the Bangor & Aroostook Railway. — 207 M. *Onawa* lies on the pretty lake of that name. About 5 M. to the S. lies *Lake Sebec*. Beyond Onawa we run through an excellent sporting district, with numerous lakes and woods.

222 M. *Greenville* (*Moosehead Inn*, *Evoeth House*, \$2-3), at the S. end of *Moosehead Lake* (see below), the chief centre of the sportsmen and anglers who frequent the district (guides, canoes, etc.). It is the junction of a railway to Bangor (see *Baedeker's United States*).

**Moosehead Lake*, the largest in Maine with 400 miles of shore-line (35 M. long, 1-15 M. wide), lies about 1000 ft. above the sea and is drained by the *Kennebec River*. Its waters abound in trout and other fish, and the forests surrounding it are well stocked with moose, caribou, deer, and ruffed grouse. Black flies and mosquitoes are very troublesome here in June and July. — From *Greenville* a small steamer plies in summer to (17 M.) *Mt. Kineo* (1760 ft.; **View*), which projects into the lake on the E. side, so as to narrow it down to a channel 1 M. across. The **Mt. Kineo Hotel* (from \$3; 500 beds) is a favourite resort of anglers and their families. Opposite *Mt. Kineo* is *Birch Point* (see below). The steamer goes on from *Mt. Kineo* to (18 M.) the N. end of the lake, whence a portage of 2 M. leads to the upper waters of the *Penobscot River*. Other steamers make the round trip every week-day. Enterprising travellers may descend this river and the lakes strung on it in birch-bark canoes (with guides) to *Mattawamkeag* (see above; 6-8 days). Canoe-tips may also be made from the head of *Moosehead Lake* via the *Allagash* and *St. John Rivers* to *Fort Kent* or *Van Buren* (see *Baedeker's United States*). A good view is obtained to the E. of *Mt. Katahdin* or *Katahdin* (5200 ft.), which is also visible from *Moosehead Lake* (to the N.E.) in clear weather. Many other steamers ply on the lake.

Beyond *Greenville* the train runs along the W. side of the lake. Near (234 M.) *Moosehead* (inns, guides) we cross the *Kennebec* and have a last view (right) of *Moosehead Lake*. At (241 M.) *Askwith* we cross the new railway from *Bingham* (Maine) to *Birch Point*, on the W. side of *Moosehead Lake*. Various small lakes and stations are passed, all frequented for shooting and fishing (views to the right).

At (290 M.) *Boundary* we leave the State of Maine and enter Canada. 307 M. *Megantic* (Victoria, \$2; U. S. Con. Agent; guides), on *Lake Megantic*, a sheet of water 12 M. long and 1-4 M. wide, a favourite resort of anglers and sportsmen. To the S.E. of it lies the little *Spider Lake*, with the club-house of the *Megantic Fish and Game Club*. *Megantic* is connected by the *Quebec Central Railway* with (60 M.) *Tring Junction*, for *Lévis* and *Quebec* (see R. 4). — We now ascend a heavy grade, through a well-wooded and sparsely-settled district, to (332 M.) *Scotstown*, a lumber-settlement. At (354 M.) *Cookshire* (U. S. Agent) we cross the *Maine Central*

Railway. — 370 M. *Lennoxville*, a village with 1120 inhab., is the seat of *Bishop's College* (180 students) and *Bishop's College School*, two well-known episcopal institutions, recently rebuilt since their destruction by fire (seen to the right of the line). It is the junction of a line to *Newport* (p. 18). The stretch beyond *Lennoxville*, with the *St. Francis River* to the right, is very picturesque.

376 M. *Sherbrooke* (*Magog House*, \$2-31½; *New Sherbrooke*, \$2-21½; *Grand Central*, *Continental*, *Albion*, \$1½-2; U. S. Consul, *Mr. Paul Lang*), a city with (1901) 11,765 inhab., very attractively situated at the confluence of the *St. Francis* and the *Magog*, mainly at some distance to the right of the railway, is the chief place in the so-called 'Eastern Townships' (see below), which the railway now traverses. It is the see of a Roman Catholic Bishop, has a college with 250 students, and carries on numerous manufactures and a trade in lumber. Within the town are the picturesque *Rapids of the Magog*. We here cross the *Quebec Central Railway* (see p. 20) and the *Grand Trunk Railway* (see p. 26).

The Eastern Townships were originally settled by United Empire Loyalists, who adhered to Great Britain at the American Revolution, and form the 'English' portion of the province of Quebec.

As we leave *Sherbrooke* we cross the river *Magog*, the outflow of *Lake Memphremagog* (see below), and skirt it as it flows through its picturesque wooded channel to the left.

394 M. *Magog* (p. 18) lies at the N. end of **Lake Memphremagog* (see p. 18) and is called at by the steamer that makes the circuit of the lake. To the left we obtain a good general view of the lake, with its encircling mountains. At (412 M.) *Foster* (p. 19) we cross the *Sutton Junction* and *Drummondville* branch of the C. P. R. — 432 M. *Brigham Junction*, for the *Montreal* and *Boston Air Line* to the *White Mts.* and *Boston* (R. 3c), 438 M. *Farnham* (Rail. Restaurant; see p. 19). From (451 M.) *Iberville* a branch-line runs to *St. Hyacinthe* (p. 141) and *Sorel* (p. 141). At (452 M.) *St. John's* (see p. 14) we cross the *Richelieu* (views). 456 M. *Lacadie*; 463 M. *St. Philippe*; 468 M. *St. Constant* — 473 M. *Adirondack Junction*, the station for *Caughnawaga* (1200 inhab.), at the S. end of the *Lachine Bridge* (see below), to the left. *Caughnawaga* is an Indian reservation and the home of the half-breed *Iroquois* remnant of one band of the *Six Nations* (comp. p. 210).

These Indians are famous as lacrosse-players and boatmen; and a band of fifty of them did excellent service in the latter capacity on the British expedition that ascended the *Nile* in 1884. The town walls, built by the French in 1721, are almost intact on three sides of the older part of the village, round the *Church*. The *Presbtery*, built in 1725, contains the once miracle-working remains of the Mohawk *Saint Tehgahkwita*, the room and desk of the historian *Père Charlevoix*, and some valuable vestments.

We now cross the *St. Lawrence* by the light and graceful '*Lachine Bridge*' (views), built of steel, on the cantilever principle. The channel-spans are each 408 ft. long. Below, to the right, are the

**Lachine Rapids* (p. 230) Just beyond the bridge is the little town of Lachine (p. 230, left), with its large convent. From (477 M.) *Montreal Junction*, where our line is joined on the right by the lines from Toronto, Ottawa, etc., the train runs towards the E. to —

482 M. *Montreal* (Windsor Street Station; see R. 28)

17. From St. John to Quebec (Lévis).

577 M. INTERCOLONIAL RAILWAY in 16¼-18½ hrs (fare \$ 11.75, sleeper \$ 2.50). [To *Montreal* in 21-23 hrs.; fare \$ 14.50, sleeper \$ 2.50]

St. John, see R. 10. The first part of the line, running along the bank of the Kennebecasis Bay and River, is picturesque and interesting, but beyond Sussex it traverses a well-settled farming-district offering no scenic beauty. — The railway runs for a mile or two through a marshy valley till it reaches the bay. 3 M. *Coldbrook*, an industrial suburb of St. John. At (7 M.) *Riverside* we overlook the Kennebecasis Rowing Course, the scene of many famous races. 9 M. *Rothsay* (Bellevue, \$ 1½-2; Kennedy, \$ 1½), delightfully situated on the E. shore of *Kennebecasis Bay*, is perhaps the most popular summer-residence and resort of the St. John people. The bay now gradually contracts into the *Kennebecasis River* — 22 M. *Hampton* (Heath Hall, \$ 1½-2), with 2026 inhab. and the summer-homes of many citizens of St. John, is the junction of a line running to the S. to (28 M.) *Quaco* and (30 M.) *St. Martin's* (Kennedy's, \$ 1½), on the Bay of Fundy. — 33 M. *Norton* is the junction of a branch-line to (45 M.) *Chipman*, on *Grand Lake* (p. 35). 40 M. *Apohaqui*, with mineral springs. 44 M. *Sussex* (Depot House, \$ 1½) is a busy little town with 1400 inhab. and a military camp. The railway now ascends to (55 M.) *Dunsinane* (160 ft.), on the 'height of land' between the Kennebecasis and the Petitcodiac River (see below). We then descend to (66 M.) *Petitcodiac* (Mansard House, \$ 1-2), on the river of that name, the junction of lines to *Elgin* and *Havelock*. The latter is near *Canaan River*, a good trout-stream. — 72 M. *River Glade*, near the *Pollet River Falls*. — 76 M. *Salisbury*, a village with a few hundred inhabitants.

FROM SALISBURY TO ALBERT, 45 M., *Salisbury & Harvey Railway* in 3 hrs (fare \$ 1.35). This line runs towards the S.E. and reaches the *Petitcodiac*, flowing between its fertile salt-marshes, at (21 M.) *Hillsboro* (Empire House, \$ 1½), a town of (1901) 2907 inhab., with manufactures and exports of plaster. The singular *Hopewell Cape Rocks* are most easily reached from this station (8 M.). — 29 M. *Albert Mines* was once important for its mines of 'Albertite' coal, perhaps the most valuable coal ever known (now exhausted) 42 M. *Hopewell Hill*, near Hopewell Cape (p. 87); 44 M. *Riverside*; 45 M. *Albert* (terminus), all on or near the arm of the Bay of Fundy into which the Petitcodiac flows. *Harvey* lies 3 M. from Albert.

The next station of importance is (89 M.) *Moncton* (p. 87), where we join the main line of the Intercolonial Railway from Halifax.

From this point to (577 M.) *Quebec*, see R. 24.

III. NOVA SCOTIA.

Route	Page
18. Halifax	50
Environs of Halifax	58
19 From Halifax to Sydney, Cape Breton, Bras d'Or Lakes, Louisbourg	59
a. By Railway	59
From Ferrona to Sunny Brae	59
From Stellarton to Pictou	59
Antigonish Mts and Arisaig Peninsula	61
From Point Tupper to St. Peter's	62
From Point Tupper to Inverness	62
b. By Steamer	63
Arichat	65
Environs of Baddeck, Whycomagh	66
Sydney Coal Fields	69
Louisbourg	69
20. From Halifax to St. John	71
a. Viâ Digby	71
Evangeline District	73
From Kentville to Kingsport	74
From Kingsport to Parrsboro	74
b. Viâ Mahone, Bridgewater, Middleton, and Victoria Beach	77
c. Viâ Moncton	77
21. From Halifax to Yarmouth	78
a. By Halifax and South Western Railway	78
Lake Rossignol	79
b. By Steamer	80
22 From Digby to Yarmouth	82
23 From Windsor to Truro	82
24. From Halifax to Quebec	83
Environs of Truro	84
From Oxford Junction to Pictou, Parrsboro, Joggins Shore	85
Chignecto Ship Railway, Fort Beauséjour and Fort Lawrence, From Sackville to Cape Tormentine and Cape Traverse	86
Shediac and Point du Chêne, From Moncton to Buc- touche, Richibucto and St. Louis	87, 88
The Miramichi	88
From Chatham to Fredericton	89
From Gloucester Junction to Shippegan	89
The Restigouche, Baie des Chaleurs, Gaspé Peninsula	90
From Matapédia to New Carlisle and Paspébiac	91
Little Métis	93
From Rivière du Loup to Connors	95

18. Halifax.

Arrival. The *Intercolonial Station* (Pl. E, 1), at which all trains arrive, lies on the N side of the city, about 1 M from the principal hotels. Cabs and hacks meet the train (fare 50 c for 1-2 pers., 25 c. for each addit. pers., $\frac{1}{2}$ cwt of luggage included), and the tramway along Lockman St. and Barrington St passes close to the station and near the hotels. The hotels do not generally send omnibuses or representatives to meet their guests. — Cabs are also in waiting on the *Steamboat Wharves* (fare 25 c each pers.). — It should be remembered that Nova Scotia time, as observed at Halifax and throughout the province, is the Atlantic Standard time, 1 hr. ahead of Eastern Standard time (p. xii).

Hotels. HALIFAX HOTEL (Pl. a, E, 4), 97-103 Hollis St., recently refitted, \$2 $\frac{1}{2}$ -3; QUEEN (Pl. b, E, 4), 114-115 Hollis St., \$2-2 $\frac{1}{2}$; KING EDWARD (Pl. e; E, 1), opposite the railway-station, \$1 $\frac{1}{2}$ -2 $\frac{1}{2}$; WAVERLEY (Pl. c, D, 5), 174 Pleasant St., \$2 $\frac{1}{2}$; GROSVENOR, 7 Hollis St. (Pl. D, 4), these two frequented by many who prefer quiet; ACADIAN (Pl. d, E, 4), 88 Granville St., \$1 $\frac{1}{4}$; CARLETON (temperance) 63 Argyle St. (Pl. E, 4), \$2 $\frac{1}{2}$; R. from \$1; ALBION (Pl. f, E, 4), 20 Sackville St., \$1-1 $\frac{1}{2}$; ROYAL (Pl. g; E, 3), 119 Argyle St., \$1 $\frac{1}{4}$ -1 $\frac{1}{2}$; LORNE, 81 Morris St. (Pl. D, 5), \$1 $\frac{1}{2}$ — "BIRCHAM-BLOOMINGDALE, two houses in charming grounds on the North West Arm (p. 59), $\frac{1}{4}$ - $\frac{1}{2}$ hr. by tramway from the centre of the city, adapted for a long stay, \$2 $\frac{1}{2}$ -3.

Restaurants. *Mitchell* (confectioner), 25 George St., *Teas*, 82 Barrington St.; *Barns*, 32 Salter St.; *Woolmough*, 153 Hollis St.

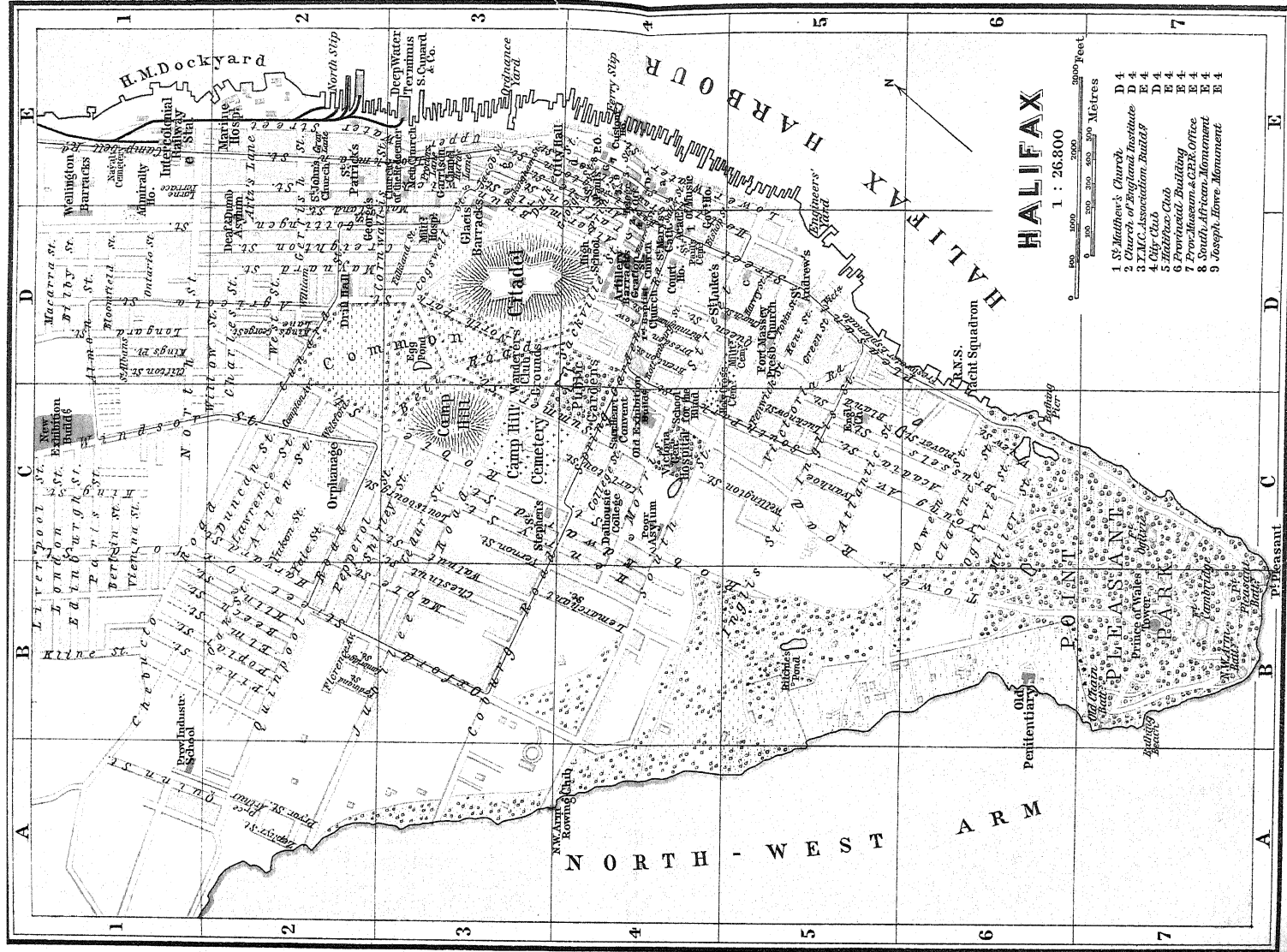
Cabs. For each pers. 1 M. 25 c., $\frac{1}{2}$ M. 30 c., 2 M. 40 c., $\frac{2}{3}$ M. 45 c., 3 M. 50 c.; half-fare in returning; $\frac{1}{4}$ hr. waiting free, each addit. $\frac{1}{4}$ hr. 15 c., per hr. 75 c.; with two houses \$1. Between midnight and 6 a. m. (7 a. m. in winter) by agreement, not to exceed double fare. From railway-station or wharf, see above. — **Tramways** traverse the entire city from N to S, with various branch-lines (fare 5 c.; six tickets 25 c.). — **Observation Carriages** (*Robinson's Tourist Service*), leaving the Post Office (p. 54) at 9.50 a.m. and 2.30 p.m., take in all the points of interest (3 hrs.; fare 50 c.).

Steamers ply regularly from Halifax to *Prince Edward Island* (p. 97), *Sydney* (p. 67), *Port Mulgrave* (p. 61), *Newfoundland* (p. 102), *Bridgewater* (p. 81), *Lunenburg* (p. 81), *St. Pierre and Miquelon* (p. 124), *Yarmouth* (p. 80), *Boston* (R. 7c), *New York*, *Baltimore*, *Liverpool* (see R. 1b), *London* (R. 1b), *Glasgow* (R. 1d), *Havre*, *Bermuda*, *Jamaica*, *Mexico*, *Havana*, and many other ports. — *Ferry Steamer* to *Dartmouth* (p. 58) every $\frac{1}{4}$ hr. — *Harbour Excursion Steamers*, see p. 59. Comp. also advertisements in newspapers and at hotels.

Amusements. *Academy of Music* (Pl. D, 4), Barrington St.; *Orpheus Hall* (concerts, etc.), Granville St. — *Skating Rink*, Tower Road (military concerts); *Curling Rink*, Tower Road, *Garrison Cricket Ground*, Quinpool St.; *Wanderers' Amateur Athletic Association*, see p. 57, *Studley Quoit Club*. — Regattas held weekly in summer by the boating-clubs mentioned below. *Royal Nova Scotia Yacht Squadron* (Pl. D, 6), at the end of Pleasant St.; *Wanderers' Boat Club*, at the foot of Morris St. (Pl. E, 5); *Lorne Amateur Aquatic Club*; *North West Arm Rowing Club*; *Halifax Amateurs Boating Club*. Small boats may be hired at the *North Slip* (Pl. E, 2), at the *Ferry Slip* (Pl. E, 4), and at *Luke's*, Freshwater Esplanade (Pl. D, 5). — *Band Concerts* in the Public Gardens (Sat. afternoon) and at Green Bank (entr. to Point Pleasant Park, p. 56). — *Anglers* could consult the pamphlet issued gratis by the Board of Trade (see p. 51).

Clubs. *Halifax Club* (Pl. 5; E, 4), 172 Hollis St.; *City Club* (Pl. 4; D, 4), 32 Barrington St., *Saragway Country Club*, on the North West Arm; *Mimac Country Club*, on the Sambro Road; *Royal Nova Scotia Yacht Squadron*, see above.

Consuls. U. S. Consul-General, *Mr. William R. Holloway*, Herald Building, cor. of Granville & George Sts. — French Consular Agent *Mr. G. E. Francklyn*, 193 Upper Water St. — Austrian Consul, *Mr. H. L. Chipman*, 18 Sackville St. — German Consul, *Mr. McCallum Grant*. — Italian Consul, *Mr. W. J. Fisher*, St. Paul Building, Barrington St.



Post Office (Pl. E, 4), Hollis St., corner of George St (open 5 a.m. to 11 p.m.)

Information Bureau. Visitors desiring information about the city and province are invited to call at the rooms of the *Board of Trade*, cor. of Hollis St. and Sackville St (Pl. E, 4)

Halifax, the capital and largest city of Nova Scotia, is beautifully situated on the S. E. coast of the province, in $44^{\circ} 59' 22''$ N. lat. and $63^{\circ} 35' 30''$ W. long., on the E. slope of a small rocky peninsula, enclosed by its splendid harbour (see p. 56), *Bedford Basin* (p. 83), and the so-called *N. W. Arm* (p. 59). It is the chief naval and military headquarters of British North America and was long the only garrison of British regular troops in Canada. The military command of the city was taken over by the Dominion Government in 1905-6, and the garrison now consists of Canadian troops. The formidable fortifications of the town and harbour have won for it the name of the 'Cronstadt of America' (see p. 53). Halifax is also the seat of the Roman Catholic Archbishop of Halifax and the Anglican Bishop of Nova Scotia. Its position as the chief winter-harbour of Canada, as the nearest American port to Great Britain (2170 M. to Cape Clear), and as the E. terminus of the Canadian railway-system makes it of great commercial importance, and it also carries on various manufactures (see p. 52). The proximity of the coal-fields of Nova Scotia and Cape Breton makes it an invaluable coaling-station for the British fleet, while its fisheries are also very extensive. In 1901 Halifax contained, exclusive of the Imperial troops, 40,832 inhab. (one-third Roman Catholics), giving it the seventh place among Canadian cities.

The city, which covers an area 3 M. long by 1 M. wide, is laid out with considerable regularity but makes on the whole a rather dingy and shabby impression. Few of the streets are paved, and many of the buildings are still flimsy-looking wooden structures, though great improvements are now in continual operation. *Hollis* and *Barrington Streets*, the chief business-thoroughfares, are lined for the most part by substantial buildings; and some of the chief residence-streets, with their shady avenues, are very attractive. The great beauty of the situation and environment, however, entirely outweighs any defects in detail. The characteristics of the social life of what claims to be 'the most British city in America' have been largely influenced by the presence of the British naval and military officers, while the red-coats and blue-jackets still form a picturesque element in the streets. Halifax is said to be one of the richest, as it is one of the most charitable, cities of its size on the Continent. The climate is healthy and not so extreme as that of inland points on the same parallel (range from -10° to $+90^{\circ}$ Fahr.).

History. The fact that the safe and capacious *Bay of Chebucto* ('chief haven') was the American rendezvous of the ill-fated expedition of D'Anville in 1746 led to the demand of the Massachusetts colonists that a point of such strategic importance should be occupied by Imperial forces. The British Lords of Trade saw the wisdom of acceding to this

request and accordingly sent out a body of 2376 emigrants, under the *Hon. Edward Cornwallis*, Governor of Nova Scotia, who landed in June, 1749, and gave the name of *Halifax* to the new settlement in honour of the Earl of Halifax, then President of the Board of Trade and Plantations. In spite of the nominal submission of the Acadians and Indians, these allies for a time did all in their power to harass the infant colony, and in 1751 the savages destroyed the village of Dartmouth (p 58), which had been planted on the other side of the bay. In 1751-52 about 500 Germans were added to the population (comp p 58). Halifax grew steadily in importance as a naval station, it was the rendezvous of the powerful fleet and army that captured Louisbourg in 1758 (see p 70) and also of Wolfe's armament both before and after the siege of Quebec (1759). During the American Revolution, Halifax was one of the chief bases of operation against the revolting Colonies, and the war of 1812-3 also brought considerable benefit to the town. During the American Civil War, Halifax Harbour was the starting-point of numerous blockade-runners, and many of its citizens are said to have laid the foundations of their fortunes at this time. The population of Halifax was estimated at 5000 a few years after its foundation, but afterwards sank to 3000, through the attraction exercised on the citizens by the New England colonies. At the close of the American Revolutionary War the population rose to 12,000, but it was not much more than a third of this seven years later. During the present century the growth has been steady though comparatively slow. The population rose from 14,422 in 1838 and 20,749 in 1851 to 25,126 in 1861, to 29,582 in 1871, to 36,100 in 1881, and to 38,556 in 1891. — The *Halifax Gazette*, established in 1752, was the first Canadian newspaper.

Industry and Commerce. The chief imports at Halifax are manufactured articles from England, produce from the United States, and sugar and molasses from the West Indies. The exports include dried fish, lobsters, lumber, apples, agricultural and dairy produce, whale and seal oil, and furs. The total value of its exports in the year ending June 30th, 1905, was \$844,149 (1,688,830 $\frac{1}{2}$) and of its imports \$8,187,740 (1,637,550 $\frac{1}{2}$). In the same year the vessels that entered and cleared the port had a total burden of 2,859,513 tons. — The industries of Halifax include iron-founding, brewing, distilling, sugar-refining, and the manufacture of machinery, agricultural implements, cotton and woollen goods, paper, musical instruments, gunpowder, tobacco, soap, candles, brushes, paint, chocolate, and spices.

The Province of Nova Scotia, of which Halifax is the capital, has an extreme length of 360 M., with an average breadth of about 65 M. Its area is 20,600 sq. M., equal to more than two-thirds of that of Scotland. The province, which consists of the peninsula of Nova Scotia proper and of the large island of Cape Breton, is almost wholly surrounded by water, being connected with the mainland (New Brunswick) by a low isthmus about 15 M. wide. No part of Nova Scotia is more than 30 M. distant from the coast. The surface is considerably varied in contour but nowhere exceeds 1200 ft. in height. The chief features are the Cobequid Mts. (p. 84) and other ridges running parallel with the length of the peninsula. The coast-line towards the Atlantic is very irregular and contains many good harbours. On the W. side it is more even. The E. or seaward side of Nova Scotia is for the most part barren and rocky; the best lands, such as the fruitful Annapolis Valley (p. 75), are on the side nearest the mainland. About one-sixth of the entire area is in crops or under pasturage. Wheat, oats, and fruit (especially apples) are among the chief products of the soil. Cattle-rearing and dairy-farming are also carried on. Lumbering is less important than formerly, owing to the exhaustion of the best timber. Manufactures are comparatively undeveloped. The mineral wealth of the province is great, including coal (comp pp. 69, 59, 85), iron, gypsum, and gold. One of the chief industries of Nova Scotia is the fisheries, which are very large and valuable, employing over 14,000 boats and 25,000 men. The value of the total catch in 1903, chiefly con-

sisting of cod, mackerel, lobsters, herring, and haddock, was \$7,841,602, or nearly one-third of that of the total catch of Canada. In 1905 Nova Scotia owned 2086 ships of 211,972 tons burden, or about 30 per cent of the total shipping of Canada. The population of the province in 1901 was 459,574, the bulk of whom consist, in nearly equal proportions, of persons of English and Scottish descent, after whom come the Irish, French, and Germans. — Nova Scotia was originally colonized by the French, whose first settlement was made in 1605 (comp. pp. xxii, 75). Along with New Brunswick and Prince Edward Island, it was included under the name of *Acadia* (*l'Acadie* or *La Cadie*), a name derived from a Micmac word 'Akáde', indicating 'abundance'. The exact scope of this title, however, was hotly disputed when Acadia was ceded to the English (see p. 86). The name of Nova Scotia first appears in a charter granted by James I. to Sir William Alexander in 1621. The present French inhabitants of the province are descendants of the original French settlers, most of whom, however, were expelled in 1755 (comp. p. 73). Among other outstanding events in the history of the province are the two sieges of Louisbourg (1745 and 1758, see p. 70), the foundation of Halifax in 1749 (p. 52), and the immigration of the United Empire Loyalists about 1784 (comp. p. 79). Prince Edward Island was separated from Nova Scotia in 1770, and New Brunswick in 1784. Nova Scotia was one of the four provinces which originally joined in the Confederation of 1867.

The most conspicuous single feature in Halifax is undoubtedly the *Citadel (Pl. D, 3), which occupies the crown of the peninsula, 255 ft. above the sea, and tourists cannot better begin their visitation of the city than by seeking the view which this elevated site commands. Those who start from either of the two chief hotels in Hollis St. reach the citadel most directly by ascending *Sackville Street* (Pl. D, 4), near the head of which, to the right, at the corner of Brunswick St., stands *Halifax County Academy* or *High School* (Pl. D, 4), a large and handsome building in red brick. Opposite, and adjoining each other, are the extensive *Barracks of the Royal Canadian Engineers and Artillery* (Pl. D, 4). Strangers are usually allowed to enter the citadel on application at the guard-house (gratuity to guide for 1-2 pels., ca 25c.; no cameras allowed). A good idea of its strength may be obtained by an external survey of its glacis, its deep moat, its heavily-armed bastions, and its massive masonry. On the slope below the entrance is a small structure erected as a *Town Clock*, and now occupied by Government.

The original defences of Halifax consisted of a wooden palisade and block-houses, the lines of which are roughly indicated by the present Salter, Barrington, and Jacob Sts. (comp. Pl. D, E, 3, 4). A systematic reconstruction of the entire series of fortifications was begun at the time of the Revolutionary War. Citadel Hill seems to have been first regularly fortified about 1778, but the nucleus of the present fortress is due to the Duke of Kent, who was Commander of the Garrison in 1794-7, while almost every subsequent year has seen alterations and additions. The Imperial garrison of Halifax usually amounted to about 2000 men, but it is now somewhat reduced.

The *View from outside the S. E. bastion includes the central part of the city; the beautiful harbour, with its shipping and fortified islands (comp. p. 56), the town of Dartmouth (p. 58), on the opposite side of the harbour, with its large lunatic asylum, the fortifications at the mouth of the harbour; and the distant ocean beyond. By walking round the outside of the ramparts, we may survey every part of the city in turn, backed by the North West Arm (p. 59) towards the W. and by Bedford Basin

(p. 83) towards the N. At the S. W. base of the Citadel Hill lie the Public Gardens (p. 57) and the Athletic Grounds of the Wanderers' Club (p. 57); to the W. are the Common (p. 57) and the Garrison Cricket Grounds (p. 57).

From the Citadel we may now return to Hollis St. via *Buckingham Street* (Pl. E, 3), noticing the *Glacis* or *Pavilion Barracks* (Pl. D, E, 3), at the N. end of the glacis, with the quarters for the married men. Following *HOLLIS STREET* (Pl. D, E, 4, 5), with its banks, insurance-offices, and shops, towards the S. (right), we soon reach (left) the **Dominion Building**, a substantial pile of brown freestone on a granite basement, containing the *Post Office* (Pl. D, 4). Just below the Dominion Building, at the corner of Bedford Row and Market St., is the new *Custom House* (Pl. E, 4), a handsome structure of native freestone. Opposite, in the C. P. R. building at the S. corner of Market St., is the *Provincial Museum* (Pl. 7; E, 4).

The museum (open free on week-days, 10-4) contains specimens illustrating the zoology, botany, and mineralogy of Nova Scotia, Indian curios, historical relics, and a few portraits. A gilt pyramid represents the amount of gold produced by the province in 1862-93 (valued at \$10,860,900).

Nearly opposite the Dominion Building stands the ***Provincial Parliament Building** (Pl. 6; D, 4), a sombre but somewhat imposing stone building, finished in 1818 and surrounded by a small tree-planted square. The Legislature generally meets in February.

At the S. end of the building is the *Chamber of the Legislative Council*, with portraits of George II. and Queen Caroline, George III. and Queen Charlotte, William IV., Sir Thomas Strange (by *Benj. West*), Judge Haliburton ('Sam Slick'; p. 72), Sir W. Fenwick Williams (a native of Nova Scotia), the heroic defender of Kars, and Sir John Inglis (a native of Halifax), the defender of Lucknow. Here also is a tablet to the memory of John Cabot (d. ca. 1498). — The *House of Assembly*, at the N. end, has portraits of Joseph Howe and J. W. Johnston. — The *Library*, in the centre of the building, contains a good collection of books relating to Nova Scotia and some interesting M.S. records. — In the small *Council Chamber* is the table round which Cornwallis and his associates assembled when holding the first meeting of the new Council of Nova Scotia on board the 'Beaufort' (July 14th, 1749; comp. p. 52).

To the N. of the Parliament Building is the *South African Memorial* (Pl. 8, E, 4), commemorating Nova Scotians who fell in the Boer War (1899-1902). In a corresponding position to the S. is a *Statue of Joseph Howe* (1804-73; Pl. 9, E, 4), 'journalist, orator, poet, statesman, prophet, patriot, Briton'.

A little farther along Hollis St., to the right, is the substantial home of the *Halifax Club* (p. 50), while on the opposite side of the way, in the next block, are the *Queen* and *Halifax Hotels* (p. 50). To the right, near Bishop St., are the grounds of **Government House** (Pl. D, 4), the residence of the Lieutenant-Governor, the front of which faces Pleasant Street. The building dates from 1800-1805.

About $\frac{1}{4}$ M. farther on, Hollis St. ends at the *Engineers' Yard* (Pl. D, 5), usually known as the *Lumber Yard*. In the meantime we may turn to the right and follow *Pleasant Street* (Pl. D, 5) back towards the centre of the city. To the left lie the *Presbyterian*

Ladies' College and the *Waverley Hotel* (Pl c, D 5; p. 50). A little farther on, to the right, is *Government House* (p. 54), opposite which is *St. Paul's Old Churchyard* (Pl. D, 4), with a monument, surmounted by a carved lion, to the memory of two Nova Scotian officers killed in the Crimea. *St. Matthew's Presbyterian Church* (Pl 1; D, 4), to the right, has a lofty spire. It is adjoined by the *Brigade Office* and the *Academy of Music* (Pl D, 4; p. 50). Opposite the last is the *Glebe House*, the residence of the clergy of the adjacent *St. Mary's Cathedral* (Pl. D, 4; R. C.), in Spring Garden Road, the most conspicuous ecclesiastical edifice in Halifax, with an elaborate granite façade and a tall white spire. The interior is decorated with painting and gilding.

Spring Garden Road (Pl. C, D, 4) leads to the W. from this point, passing the *Court House* (Pl D, 4), with the *County Gaol* behind it; *Bellevue House*, the official residence of the Commander-in-chief, at the corner of Queen St (Pl D, 4); and the *First Baptist Church* (Pl D, 4). Farther up it skirts the Public Gardens (p. 57).

Pleasant St. now changes its name to *Barrington Street* (Pl D, E, 4, 3). To the right diverges *Salter St*, with the *Masonic Hall*. To the left (No. 32) is the *City Club* (Pl 4, D 4, p. 50), between *St. Mary's Hall* and the *Church of England Institute* (Pl. 2, D, 4). We then cross *Sackville St.* (p. 53), pass the *St. Paul Building*, and soon reach the *Grand Parade*, occupying a terraced site buttressed by a wall of massive masonry. At the S. end of the Parade stands *St. Paul's Church* (Pl E, 4), a large wooden structure, built in 1750 (the year after the foundation of Halifax) on the model of St. Peter's, Vere St, London.

Strangers should visit the interior of this old church for the sake of its interesting collection of mural tablets and monuments to the memory of distinguished Halifaxians, Nova Scotians, and others. In the E. gallery is that of *Baron de Seitz*, a Hessian officer who died here in 1778 and was buried in St. Paul's in full regimentals.

St. Paul's was long used as the cathedral of Halifax, but in later years the pro-cathedral was *St. Luke's*, which was burned down in 1905.

At the opposite end of the Parade stands the handsome new *City Hall* (Pl. E, 3, 4), occupying the site of the original building of Dalhousie College (p. 57). — Farther on, Barrington St becomes *Lockman Street* (Pl. E, 3, 2) and runs out to the *Railway Station* (Pl. E, 1), beyond which it makes a final change of name to *Campbell Road* (Pl. E, 1).

Granville Street (Pl. E, 4), parallel to and between *Hollis St.* and *Barrington St.*, is one of the chief business-streets of Halifax and contains some important shops, newspaper-offices, etc. At its intersection with *Prince St.* stands the substantial building of the *Young Men's Christian Association* (Pl. 3; E, 4), with its reading-room and library.

Lower Water Street (Pl. D, E, 5, 4), beginning at the Engineers' Yard (p. 54), and *Upper Water Street* (Pl. E, 3, 2) skirt the water-side, with its innumerable docks, wharves, and warehouses. The *Green Market*, held at the corner of *George St.* on Sat morning,

should be visited. The French Acadian, the native Micmac, and the dusky African, selling their wares here, combine to make a scene full of colour and interest. At the point where Lower Water Street ends and Upper Water St. begins extends *Ordnance Yard* (Pl. E, 3), with its large stores of guns, ammunition, and other warlike material. Farther on, opposite the *Long or Railway Wharf*, is a *Grain Elevator* (Pl. E, 2), with a capacity of 500,000 bushels — To the right, a little farther on, is the *Dockyard* (Pl. E, 1, 2, strangers usually admitted on application; gratuity to guide, for 1-2 pers., ca. 25 c.; no cameras allowed), 161½ acres in extent, founded in 1758 and surrounded by a high stone wall. It contains extensive store-houses, machine-shops, and magazines, and all the usual appliances of a first-class dockyard. The *Hospital Yard*, with the *Marine Hospital* (Pl. E, 2), practically forms part of the Dockyard. — Opposite lies the *Intercolonial Railway Station* (Pl. E, 1). — A little farther to the N. is the huge *Dry Dock*, the largest in Canada, being 610 ft. long and 102 ft. wide. It cost \$1,000,000.

The **Harbour* (Pl. C-E, 1-7), 6 M. long, with an average width of 1 M., affords excellent deep-water anchorage at all states of the tide and is effectively sheltered by Macnab's and George's Islands. On the N. it communicates with *Bedford Basin* (p. 83) by a deep channel known as the *Narrows*. The harbour is usually alive with all kinds of shipping, and on a bright day presents a sight that will linger long in the memory. Halifax is occasionally visited by British men-of-war during the summer. Visitors are generally welcomed on board and may take boat at the *North Slip* (Pl. E, 2; fare 25 c.). The harbour-fortifications are of immense strength. The green and inoffensive-looking *George's Island*, opposite the Ordnance Yard, is, perhaps, under modern conditions of warfare, a more formidable fort than the citadel itself. It interlaces its fire with *Fort Clarence*, on the opposite shore. On *Macnab's Island*, at the mouth of the harbour, is *Prince's Battery Fort*, which crosses its fire with that of *York Redoubt*, situated on a high bluff on the W. shore. On *Sambro Island*, off the mouth of the harbour, is *Fort Spion Kop*. There are other strong batteries in *Point Pleasant Park* (see below), while the entrance is further protected by an extensive system of submarine mines and torpedoes.

The **View of Halifax from the harbour* is in its own way as fine as that from the citadel and should be secured by every visitor (afternoon light best, sunsets often superb). The view may also be enjoyed from a small boat (see p. 50) or from the deck of the ferry steamer to Dartmouth (see p. 58). Excursion steamers, see p. 58.

The S. continuation of Pleasant St (see p. 54) leads through the district of *Freshwater* to *Point Pleasant Park* (Pl. B, C, 6, 7; tramway to Green Bank, Pl. C, 6), occupying the extremity of the peninsula on which the city lies and recalling in its location Stanley Park at Vancouver (p. 286). The park, which is 160 acres in extent, is traversed by numerous excellent roads and paths, and the drive

round its outer margin commands exquisite views of the harbour and of the N. W. Arm (p. 59). Several masked batteries are concealed among its groves of pine and fir, and on the summit of the ridge is an old martello tower known as the *Prince of Wales' Tower*. On the N.W. Arm (p. 59), just beyond the W. limit of the park, is the old *Penitentiary* (Pl. B, 6), now used as part of the works of the People's Heat & Light Co.

We may leave the park by the *Young Avenue Entrance* (Pl. C, 6), with its handsome gates, and make our way via the shady *South Park Street* (Pl. C, 5, 4) to the Public Gardens, passing the *Cemetery of the Holy Cross* (Pl. C, D, 4, 5; with a chapel said to have been erected in one day), the *School for the Blind* (Pl. C, 4; visitors admitted on Wed. afternoon), and the *Old Exhibition Building* (Pl. C, 4; skating-rink in winter).

The *Public Gardens* (Pl. C, D, 3, 4), about 14 acres in extent, and somewhat recalling the Boston Public Garden, deservedly form one of the chief sources of Haligonian pride, and present a highly attractive picture, with their beautiful shade-trees, well-trimmed sward, picturesque lake, and gay flower-beds. The show of flowers is especially brilliant in Aug. and the first half of September. A military band plays here in summer on Sat. (4-6 p.m.), and illuminated evening-fêtes are held from time to time.

On the N. the Public Gardens are adjoined by the *Athletic Grounds of the Wanderers' Club* (Pl. D, 3), and beyond these stretches the *Common* (Pl. D, 2, 3), a piece of Government property on which sham-fights and military reviews are occasionally held. At the N.W. corner of the Common is a large *Drill Hall and Armoury* (Pl. D, 2), a massive turreted structure in Nova Scotia sandstone, completed in 1899 and making an imposing appearance.

Farther to the N.W., at the corner of Windsor St. and Almon St., is the *New Exhibition Building* (Pl. C, 1), where an agricultural and industrial fair is held every autumn.

To the S. of the Public Gardens stands the *Convent of the Sacred Heart* (Pl. C, 4), beyond which are the grounds containing the large *Poor Asylum* (Pl. C, 4) and the *Victoria General Hospital* (Pl. C, 4). — Spring Garden Road (p. 54), skirting the S. side of the Gardens, ends on the W. at Robie St., where are a *Methodist Church* and *St. Stephen's* or the *Bishop's Chapel* (Pl. C, 3).

A little to the S. of this point, in the block enclosed by Robie, Morris, Carlton, and College Sts., stands *Dalhousie College* (Pl. C, 4), a large and handsome building of red brick, with a central tower, erected in 1886-87. The *Medical College Building* is in the adjoining block.

Dalhousie College and University was founded in 1821 by the Earl of Dalhousie, then Governor-General of Canada. The original endowment was derived from funds collected at the port of Castine, in Maine, during its occupation by the British in 1812-14. Since then its endowments have been greatly increased by the liberality of Mr. George Munro (of New York),

Mr. Alexander McLeod, Sir William Young, and other generous Nova Scotians. The present charter of the University, which is undenominational, dates from 1863, with subsequent modifications. The President is *Dr. John Forrest*. The original building of the college stood on the site of the City Hall (see p. 55).

The University includes faculties of arts, law, medicine, and science and is attended by about 350 regular and special students. It is well appointed in every way and possesses excellent laboratories and a good law-library. The **Collection of Nova Scotia Birds*, including a specimen of the rare red duck (*Fulizula Labradorica*), is of great interest. The valuable *Akins Collection* of books and pamphlets relating to the E. Provinces of British North America has been temporarily deposited in Dalhousie College.

Gottingen Street (Pl. D, 3, 2, 1) leads towards the N. from Citadel Hill. Immediately to the right is the *Military Hospital* (Pl. D, 3), with the *Garrison Chapel* (Pl. E, 3) behind it. Farther out are the *Old Ladies' Home*, the *Old Men's Home*, and the *Deaf and Dumb Asylum* (Pl. D, 2; r.). Still farther on, to the right, in pleasant grounds, lies *Admiralty House* (Pl. D, 1), formerly the residence of the Vice-Admiral in command of the station. Just beyond this, on the same side, is the entrance to the large *Wellington Barracks* (Pl. D, E, 1), which have accommodation for about 1200 men (comp p. 53). About $\frac{1}{4}$ M. farther on is a hill crowned by the small *Fort Needham*.

We may vary our route in returning from this point by following *North Street* and *Brunswick Street* (Pl. E, 2, 3). The latter contains the *Old Dutch Church* (l.), a tiny edifice erected in 1755 for the use of the German Lutheran immigrants (p. 52). Nearer the centre of the town are *St. John's Presbyterian Church*, *St. George's Church* or the *Round Church* (Pl. E, 2, r.), *St. Patrick's Roman Catholic Church* (Pl. E, 2; 1), and the *Universalist* and *Methodist Churches* (Pl. E, 3).

Environs of Halifax.

One of the favourite drives from Halifax is that along *Bedford Basin* (p. 83) to (9 M.) *Bedford* (p. 83). To the right, just beyond *Rockingham* (p. 83), we pass (5 N.) the site of the *Prince's Lodge*, the residence of the Duke of Kent (p. 53), of which nothing now remains except a few traces of the foundations and the band-rotunda. This drive may be continued entirely round Bedford Basin (25 M.), following a beautiful chain of lakes to Dartmouth (see below) and crossing thence to the city by ferry. — Another drive leads to the *Dutch Village* and the (3 M.) *Dingle*, at the head of the N.W. Arm. About 4 M. beyond the Dingle, on the road to *St. Margaret's Bay*, is the *Rocking Stone*, a huge mass of granite weighing 160 tons, which can be easily moved by a small wooden lever. — The *Chain Lakes*, the source of the water-supply of Halifax, lie 3 M. to the S.W.

Dartmouth (*Acadian House*), a town with 4806 inhab., on the E. side of Halifax Harbour, is reached from Halifax by ferry-steamers plying every $\frac{1}{4}$ hr. (fare 5 c., wharf at the foot of George St., Pl. E, 4). [It may also be reached by railway, via Windsor Junction, in $\frac{1}{2}$ hr. (see p. 84).] It possesses a large sugar-refinery, rope-walks, a marine railway, and a skate-factory. About $\frac{1}{2}$ M. from the town, on a height overlooking the harbour, is the large *St. Hope Lunatic Asylum*. Below Dartmouth lies *Fort Clarence*, commanding the entrance to the *Eastern Passage*, a narrow channel with numerous shoals, supposed to be impassable for large vessels until the Confederate steamer 'Tallahassee' proved the contrary by making her

escape through it in 1862. A pleasant drive may be enjoyed among the lakes to the N. of Dartmouth, a favourite skating-resort in winter. About 4 M. to the N. of Dartmouth are the *Waverley Gold Mines* — *Cow Bay*, 7 M. to the S.E. of Dartmouth, has a fine beach and is resorted to for sea-bathing (good surf)

Small excursion-steamers ply duly in the harbour in summer (fare 50 c.), passing *Macnab's Island* (p 56), a favourite picnic-resort, with a sandy beach, a lighthouse, a fort, and a rifle-range — From Macnab's Island the steamers go on up the *North West Arm* (Pl A, 2-7) formerly called the *Sandwich River*, a charming sheet of water, about $3\frac{1}{2}$ M. long and $\frac{1}{3}$ M. wide. On its N.E. shore lie many of the most attractive summer-residences of Halifax. At its head lies *Melville Island*, with the military prison, in which American prisoners-of-war were confined in 1812. The Arm is a favourite boating-resort and also affords some fishing. *Public Baths* have been recently erected here and also on the Bedford Basin side of the peninsula

From *Halifax* to *Bridgewater* and *Yarmouth*, see R. 21; to *Windsor*, *Annapolis*, and *St John*, see R. 2; to *Moncton* and *Quebec*, see R. 24; to *Cape Breton*, by railway and steamer, see R. 19, to *Prince Edward Island*, see R. 25; to *Newfoundland*, see R. 26, to *Boston* by steamer, see R. 7 c.

19. From Halifax to Sydney. Cape Breton.

Bras d'Or Lakes. Louisbourg.

a. By Railway.

277 M. INTERCOLONIAL RAILWAY in 10 hrs (fare \$7.55, parlor-car \$1). Passengers for *Pictou* and *Prince Edward Island* (R. 25) diverge at *Stellarton* (see below). Travellers are strongly recommended so to arrange their plans as to make the part of the trip between Mulgrave and Sydney by steamer through the Bras d'Or Lakes, either in going or returning. The railway-company does not profess to make connection with the steamers, but it is often possible to catch the boats on Tues. and Frid (p 63). — Dining-cars are attached to all express trains from Halifax to Mulgrave, and there is a buffet-service between Point Tupper and Sydney. The meals provided at *Grand Narrows* (p 63) are good.

From Halifax to (62 M.) *Truro*, see R. 24. The line to Sydney here diverges to the right (N.E.) from that to Moncton (for St. John and Quebec, RR. 20 c, 24) and ascends the valley of the *Salmon River*, which flows to the left between picturesque banks of red sandstone. Beyond (75 M.) *Riversdale* we quit the river. 91 M. *Glengarry*; 97 M. *Hopewell* (Scotia Ho.), with a small spool-factory and a woollen-mill. — 99 M. *Ferrona*.

FROM FERRONA TO SUNNY BRAE, 13 M., railway in 1 hr. The intermediate stations are *Springville*, *Bridgeville*, and *St. Paul*. From (13 M.) *Sunny Brae* (Riverside) there is some talk of extending this line to *Guysboro Harbour*, so as to connect it with the proposed terminus of a fast transatlantic service (comp. p. 61).

A little farther on we reach the *East River* (right), which we follow to (103 M.) *Stellarton*, a prosperous mining village with about 1500 inhab., depending mainly on the *Albion Coal Mines*. It is the junction of the branch to *Pictou* (see below).

FROM STELLARTON TO PICTOU, 14 M., railway in $\frac{3}{4}$ hr. (fare 45 c.). — This line runs at first towards the W., passing (3 M.) *Westville* (Dufferin), with its coal-mines (see p. 60), and near (8 M.) *Sylvester* crosses the *Middle*

River, affording a distant view of Pictou to the right. It then turns to the right (N.), skirting the Middle River, crosses *Pictou Harbour* by a long bridge ("View"), and reaches —

14 M. *Pictou* (*Wallace*, \$2; *Aberdeen*, \$1, *U. S. Agent*), a picturesquely situated little town of (1901) 3235 inhab., with a large trade in coal and several manufactories. Of late years, however, it has been supplanted to some extent by New Glasgow (see below). Its excellent harbour opens above the town into three arms, receiving the waters of the *East*, *Middle*, and *West Rivers* (comp. above and below). Immediately opposite lie the coal-wharves of *Pictou Landing* (see below). Pictou affords excellent bathing, boating, and fishing. The principal building of the town is the *Pictou Academy*, founded in 1818 on the model of Edinburgh University and now attended by 160 students. It stands near the highest part of the town and commands a fine view. Among the graduates are Sir William Dawson (p. 135) and Principal Grant. A lobster-hutchery here turns out about 150 million young lobsters every year. Pictou, which occupies the site of an ancient Indian village, was settled in 1763 by a colony of Philadelphians, but made no great progress till 10 years later, when the first of several bands of Scottish Highlanders arrived. It is one of the chief centres of the legends of the Micmac demigod *Glooscap* (comp. p. 74). — The *Pictou Coal Field* covers an area of about 35 sq. M. and is noted for the unusual development of some of its beds. The 16 seams known vary in thickness from 3 ft. to 33 ft.

Stellarton is also connected with *Westville* (p. 59), *New Glasgow* (see below), and (3 M.) *Trenton* by an electric railway.

Steamers from Pictou to *Charlottetown*, P. E. I., see R. 25. — Steamers also ply from Pictou to the *Magdalen Islands* (p. 102), calling at *Georgetown* (p. 101) and *Souris* (p. 102), and to *Cheticamp*, in Cape Breton, calling at *Port Hood*, *Malbou Mouth*, *Margaree* (p. 66), and *Pleasant Bay*. — In winter the iron steamers 'Minto' and 'Stanley' ply from Pictou to *Georgetown* and *Charlottetown* (comp. p. 97).

105 M. *New Glasgow* (30 ft.; *Vendome*, *Norfolk*, *Windsor*, \$1½-2, all unpretending; railway-meals at the last 50 c., but see p. 59), a new and thriving little town of (1901) 4447 inhab., on the *East River*, with coal-mines, iron and steel works, ship-building yards, glass-works, and various other substantial indications of a prosperous future. Iron, coal, and lime all occur in the district in convenient proximity. A short railway, mainly for shipping coal, runs from New Glasgow to (8 M.) *Pictou Landing* (see above).

About 2 M. from New Glasgow (station on the railway to Pictou Landing) are the interesting works of the *Nova Scotia Steel Co.*, long the only steel-works in Canada, with open-hearth converters, fine rolling-mills, steam-hammers, etc. Including those in its iron-works, coal-mines, and glass-works, the company employs about 1500 men. In 1893 the first steel steamer of Nova Scotia was constructed and equipped at New Glasgow, these works supplying her shaft and other castings. — Among the coal-mines of the neighbourhood may be mentioned the *Drummond Pit*, near Westville, which is entered by a slope 5900 ft. long, employs 650 men, and produced 265,550 tons of coal in 1901. Its winding-engine (500 horse-power) will interest experts. — The rusty line running to the *Albion Mines* (p. 59) is the oldest railway in America, and its original locomotive, the 'Samson', is still preserved. — An excellent View of the town and district, extending to Prince Edward Island, is obtained from *Fraser's Mt.*, the top of which is about 1½ M. from the town by road. — A small steamer plies down the *East River* (which is tidal to a point some distance above New Glasgow) to (10 M.) *Pictou* (see above), affording a very pleasant trip.

Beyond New Glasgow we traverse a somewhat uninteresting district. We cross the *Sutherland River* and the *French River* before

reaching (119 M.) *Merigomish*, where we have a view to the left of *Merigomish Harbour*. The line then ascends to the top of a ridge, affording a view of *Piedmont Valley* (left), with retrospects (also to the left) of *Northumberland Strait*. Beyond the highest point (420 ft.), near (127 M.) *Avondale*, we descend rapidly to (129 M.) *Barney's River*, (133 M.) *Marshy Hope*, and (141 M.) *Brierley's Brook*. A little farther on we come in sight (r.) of the attractive little town of (147 M.) **Antigonish** (accent on the last syllable; *Merrimac, Queen*, \$ 1½-2), with the large and handsome Roman Catholic *Cathedral of St. Ninian*, the *College of St. Francis Xavier* (145 students), and an *Academy for Girls*. The town lies at the head of a picturesque but not very useful little harbour and contains (1901) 2428 inhab., mostly of Highland blood, some of whom still speak Gaelic. It carries on a trade with Newfoundland and is the distributing-centre of a fine farming and dairy district. Many pleasant drives and walks may be taken in the neighbourhood.

The *Antigonish Mts.*, in the *Arisaig Peninsula*, to the N.W. of Antigonish, reach a height of 1000 ft. and afford good views. The coast-village of *Arisaig*, with its long wooden pier, is a genuinely Highland colony. *Cape St. George*, forming the extremity of the peninsula, bears a powerful lighthouse. — About 5 M. to the S.W. of Antigonish is *Gaspereau Lake*. — Coaches run from Antigonish, via *College Lake* and *Lochaber*, to (35 M.) *Sherbrooke* (*Sherbrooke Ho.*), at the mouth of the *St. Mary's River*, 12 M. from the Atlantic Ocean and the headquarters for a fine fishing-district. A little gold-mining is also carried on near *Sherbrooke*.

To the left, as we leave Antigonish, rises the *Sugar Loaf* (750 ft.), a fine point of view. We cross the *West River* and skirt the harbour. 156 M. *Pomquet*, with its harbour (l.). From (159 M.) *Heatherton* a coach runs to (20 M.) *Guysboro* (*Grant's Hotel*), a fishing-town near the head of *Chedabucto Bay*. [It has recently been announced that the Provincial Government has granted a subsidy for the construction of a new railway from Halifax to Guysboro along the E. shore of Nova Scotia, to be called the Nova Scotia Eastern Railway.] Beyond (162 M.) *Afton* we have views of the blue *St. George's Bay*, to the left. 167 M. *Tracadie*, an Acadian settlement with a small harbour, contains a Trappist monastery and a convent of Sisters of Charity. 175 M. *Harbor au Bouche*, another Acadian settlement. We come in sight of the *Gut of Canso* (see p. 64; left) near (179 M.) *Cape Porcupine* (600 ft.). We skirt the strait for a few miles, with views of Port Hastings (p. 62) and *Hawkesbury* (p. 62) on its opposite side, and reach —

185 M. **Mulgrave** or *Port Mulgrave* (*Seaside Hotel*, \$ 1½; *Murray Ho.*, \$ 1½; *U. S. Agent*), a small port on the Gut of Canso, with about 810 inhab. and some fishing-boats. Good bathing and fair fishing may be had in the vicinity. After stopping at the station the train backs down to the wharf, whence a ferry-boat conveys it across the Strait of Canso to (10 min.) the pier of (186 M.) *Point Tupper* (*Revere Ho.*), where we reach *Cape Breton*. Here another engine is attached to the train for the run to Sydney.

It is proposed to span the Strait of Canso by a huge cantilever bridge; but the realization of this project is still in the dim future.

The island of Cape Breton, forming the N.E. part of the province of Nova Scotia (comp. p. 52), is about 100 M. long and 80 M. wide and in 1901 contained 97,605 inhab., nearly all of Scottish Highland descent, except about 15,000 French Acadians in or near Isle Madame and on the N.W. coast. There are also about 600 Micmac Indians (p. 91). The entire centre of Cape Breton is occupied by a land-locked and almost tideless arm of the sea known as the *Bras d'Or Lakes* (see p. 63), which opens to the N.E. by two narrow passages. Indeed, since the narrow isthmus of St. Peter's has been pierced by a canal, Cape Breton may be said to consist of two islands. The rocks of the carboniferous system cover about one-half of the total area of Cape Breton, and its great wealth consists in its extensive and valuable deposits of coal (comp. p. 69). Large deposits of gypsum have also been found, and copper is mined near Sydney. The fisheries employ about 10,000 men and have an annual catch valued at \$1,500,000. The chief attractions of Cape Breton to the tourist are its delightful summer-climate and the scenery of the Bras d'Or Lakes, which, while not especially striking or grand, has a charm of its own that will hardly fail to make itself felt. Many will find an additional attraction in the site of the fortress of *Louisbourg* (p. 69), the scene of such desperate struggles for the mastery of the New World. Better hotels are much wanted throughout the island.

The name of the island is taken from that of its E. cape (p. 69), which was probably so called in honour of its Breton discoverers, though some attribute the discovery to the Basque fishermen and find the real prototype in a Cape Breton on the S.W. coast of France, near Bayonne. However that may be, the name, which is probably the oldest French name in American geography, seems to have been affixed to the cape early in the 16th cent., while there is no record of the date of its extension to the island. Cape Breton was included in a general way in the 'Acadia' of French Canada, but, save in connection with settlements made by *Nicholas Denys, Sieur de Fronsac* (see p. 65), its name scarcely appears in the history of the 17th century. The peace of Utrecht (1713), however, called it into new importance. A few Acadians, from the parts of New France that had been ceded to England, took refuge in Cape Breton, which the French renamed *Isle Royale*, while the former Governor of Newfoundland transferred his headquarters to the fine harbour where was soon commenced the powerful fortress of *Louisbourg* (see p. 70). On the final conquest of Canada by the British, Cape Breton was annexed to Nova Scotia, but from 1784 to 1820 it formed a separate province, with Sydney (p. 67) as its capital.

All students should consult the 'Historical and Descriptive Account of the Island of Cape Breton', by *Sir J. G. Bourne* (Montreal; 1892), which includes an admirable bibliography. 'Cape Breton at the beginning of the 20th Century', by *C. W. Vernon* (Toronto; 1908), affords the best scenic descriptions and accounts of natural resources.

Leaving the wharf at Point Tupper (see p. 61), the train runs to the E. and in a few minutes reaches (186 M.) *Hawkesbury Junction*, where branch-lines diverge to the right and left.

FROM POINT TUPPER (VIA HAWKESBURY JUNCTION) TO ST. PETER'S, 31 M., railway in 1¾ hr. (fare 95c.) This line runs to the S.E., passing (8 M.) *Chapel Plaisance*, (10 M.) *Evanston*, (12 M.) *Basin Road*, (19 M.) *Grand Anse*, and (25 M.) *Sporting Mountain*. — 31 M. *St. Peter's*, see p. 102.

FROM POINT TUPPER TO INVERNESS, 61 M., railway in 3½ hrs. (fare \$1.85) This line, chiefly used for the transport of coal, runs to the N. along the coast. — 1 M. *Hawkesbury* (*American Ho.*, \$1¼, *Farquhar; U.S. Agent*), a village with a good harbour and a splendid view of the straits. It is connected with Mulgrave by ferry and is called at by the Plant Line steamers (p. 63). 47 M. *Port Hastings* (*Caledonia*) opposite Cape Porcupine, a summer-resort with good walks and boating. 5 M. *Troy*; 12 M. *Cregush*; 16 M. *Craigmore*; 23 M. *Judique*; 27 M. *Catherine's Pond*. —

32 M. *Port Hood* (Oldsmith Hotel), a small harbour with (1901) 1550 inhabitants. A hill at its N. end affords a fine view of Cape Mabou (N.), Cape St. George (W.), and (on a clear day) Prince Edward Island (W.). Steamers ply hence to *Putou* (p. 60), *Canso* (p. 64), and *Pleasant Bay* — The train now leaves the coast for a little. 37 M. *Glencoe*, named after Scotland's ill-fated glen. At (44 M.) *Mabou* (Cameron House), one of the loveliest spots on this coast, we cross the *Mabou River*. *Mabou Coal Mines*, $4\frac{1}{2}$ M. to the N.W., are reached by a branch-railway. Near (47 M.) *Glen-dyer*, with its picturesque woods and gorge, we pass round the so-called *Snake Curve*. 56 M. *Strathlorne*, the centre of a picturesque country, lies close to *Loch Ban*, the N.W. arm of *Lake Ainslie* (p. 66). — 61 M. *Inverness* (*Inverness, Imperial, Grand Central*, § 1-1 $\frac{1}{2}$), formerly called *Broad Cove*, is an important coal-mining town with (1901) 1542 inhab., a fine beach, and splendid bathing. A drive may be taken to *Margaree Valley* (p. 66), 12 M. to the N.E., while on the coast, 35 M. to the N., is *Cheticamp*, a French fishing-settlement, with a conspicuous R. C. church and scenery rivaling that of Ingonish (p. 69).

Beyond Hawkesbury Junction the train for Sydney runs to the N. through a somewhat featureless district. Numerous small ponds are passed, some of which are 50-100 ft. deep; and here and there are the birch-lodges of Micmac Indians (p. 91). We cross *McDonald's Gulch*, near (200 M.) *West Bay Road*, by a steel trestle 90 ft. high and 940 ft. long. Beyond (207 M.) *River Denys* we reach the bank of the *Great Bras d'Or Lake* (see p. 65), of which we have good views to the right. 215 M. *Orangedale*. — At (231 M.) *Iona* we reach the narrow *Barra Strait*, connecting the Great and the Little Bras d'Or, and cross it by a fine iron bridge to (232 M.) *Grand Narrows*, with the plain but comfortable little *Grand Narrows Hotel* (§ 1 $\frac{1}{2}$ -2), where certain trains stop for meals (50 c.). Good boating, bathing, and fishing may be obtained here.

Steamer from Iona to *Baddeck*, see p. 64. The 'Richmond' (see below) goes on from Grand Narrows to *Marble Mountain* (p. 65) and *Johnson's Harbour*.

Beyond Grand Narrows the train hugs the *Little Bras d'Or Lake* (see p. 65) for about 30 M. (views to left) 241 M. *Shenacadie* 250 M. *Boisdale*, opposite Boularderie Island (p. 67). Important deposits of graphite have lately been discovered here. *French Vale* (560 inhab.), about 4 M. to the S. of (255 M.) *Barachois*. At (261 M.) *George's River* we cross the stream of that name and ascend on its right bank, leaving the lake. At (264 M.) *North Sydney Junction* we reach the head of the N. arm of *Sydney Harbour*, where a branch-line connects with (268 M.) the station for *North Sydney* ($\frac{3}{4}$ M. from the town; see p. 68). The train of the main line continues to (267 M.) *Leitch's Creek* and (277 M.) *Sydney* (see p. 67).

b. By Steamer.

A steamer of the *Canada Atlantic & Plant S. S. Co.* runs weekly from Halifax through the *Gut of Canso* to *Charlottetown*, P. E. I. (comp. p. 97), calling on the way at *Hawkesbury*, which it reaches in about 13 hrs. At *Hawkesbury* it connects with the Cape Breton Railway (see R. 19a) and with the steamer 'Richmond' of the *Richmond Steamboat Co.* The latter starts every Tues. & Frid. at 2 p. m. for (5 hrs.) *St. Peter's* (p. 65), where it stops for the night, going on next day to *Grand Narrows* (see above, through-fare \$ 1.75). The voyage through the Bras d'Or Lakes is continued by the

steamer running thrice daily from *Iona*, opposite Grand Narrows (p. 63), to (1¼ hr.) *Baddeck* (p. 66; fare 50 c.). From *Baddeck* a steamer of the *Bras d'Or Steamboat Co.* plies on Mon., Wed., and Frid (10 a.m.) to *North Sydney*, which it reaches at 3 p.m. (fare \$1; through-fare from Halifax by steamer \$6.50, by railway and boat \$7.50). On the return-voyage the steamer leaves *Sydney* at 7 a.m., and the route is retraced in the same way (nights at *Baddeck* and *St. Peter's*). The steamboat-lines do not profess to make connection with each other, and they are run rather in the interest of the local traffic than for the convenience of the tourist. Nevertheless the scenery of the *Bras d'Or Lakes* is so attractive, that travellers are recommended to make at least part of the trip through their quiet waters. The voyage from *Halifax* to *Hawkesbury* is hardly recommended except to those who are specially fond of the sea. — Other steamers ply daily from *Mulgrave* to *Arichat* (p. 65) and *Canso* (see below), 4 times weekly to *Guysboro* (p. 61), and weekly to *Port Hood*, *Margaree*, and *Cheticamp*. — The *St. Pierre and Miquelon Steamers* (see R. 27) run through the *Bras d'Or Lakes*, calling at *Baddeck* and *Sydney*. The above were the arrangements for the summer of 1906, but are liable to alteration. The traveller is, therefore, advised to consult the *Halifax* daily papers or apply at the offices of the steamboat companies for the latest information.

For a general description of *Cape Breton*, see p. 62.

Leaving *Halifax Harbour*, the steamer rounds *Hartland Point*, passes the entrances of *Cow Bay* (p. 59) and *Cole Harbour*, and runs to the E., along the coast. Like that to the W. of *Halifax* (R. 21b) this shore is frayed by innumerable small inlets and lined with myriads of islands; but few points on it come within the purview of the ordinary tourist. Our steamer passes most of it at night and makes no stops before reaching the *Strait of Canso*. Beyond *Cape Canso*, the easternmost point of *Nova Scotia* proper, we turn to the W. and cross the broad waters of *Chedabucto Bay*. The small seaport of *Canso* (U. S. Agent), at the point, has (1901) 2367 inhab. and is the W. terminus of some of the Atlantic cables. To the N., as we cross the bay, is the island of *Arichat* (p. 65). Beyond *Cape Argos* and *Eddy Point* (both to the left) we enter the *Gut* or *Strait of Canso* or *Canseau*, a narrow but deep channel, 15 M. long and about 1 M. wide, separating peninsular *Nova Scotia* from the island of *Cape Breton* (p. 62). It is much used by sailing-vessels, which thereby avoid the long and sometimes dangerous voyage round the E. extremity of the province. The banks of the channel, which was 'excavated by the currents of the drift period', are hilly, covered with trees, and dotted with villages. To the left, 5 M. below *Mulgrave*, is the site of *Terminal City*, where an American syndicate has blocked out a large city, intended—some day—to be the terminus of a line of swift steamers to Europe.

Beyond *Hawkesbury* (p. 62), on the E. side of the strait, the steamer goes on through *St. George's Bay* and *Northumberland Strait* to *Charlottetown* (p. 98). Passengers bound for *Cape Breton* by water, however, leave the steamer at *Hawkesbury* (p. 62) and join the steamer of the *Richmond Steamship Co.* This boat retraces part of the route we have just traversed, but, instead of crossing *Chedabucto Bay*, steers to the left, and threads the narrow *Lennox Passage*, between *Cape Breton* on the left and the islands of *Janvrin* and *Arichat* to the right.

The island of *Arichat* or *Isle Madame*, 15 M. long and 5 M. wide, contains about 4700 inhab., mainly Acadians. The chief place is the little fishing-town of *Arichat* (Sea View Ho.; U. S. Agent, 600 inhab.), on the S. side of the island. The island is frequented by a few summer-visitors in search of good boating and fishing. Steamer to Mulgrave, see p. 64.

Leaving Lennox Passage, the steamer ascends *St. Peter's Bay*, which is separated from *St. Peter's Inlet*, part of the Great Bras d'Or Lake, only by a small isthmus about $\frac{1}{2}$ M. across. Through this has been cut a short canal, 26 ft. wide and 13 ft. deep, which has practically divided Cape Breton into two large islands (comp. p. 62). Adjoining the canal is the small village of *St. Peter's* (inns), founded originally by the French in 1636 but now occupied by Scottish Highlanders.

A steamer runs hence to *East Bay* (see below) twice a week in summer.

At the mouth of the narrow *St. Peter's Inlet* are a number of islands, on the largest of which (seen at some distance to the right) is a Roman Catholic chapel. Here, on *St. Anne's Day* (July 28th), the Micmacs (p. 91) of Cape Breton hold a grand festival, accompanied by various singular celebrations, which it will repay the curious visitor to attend.

The **Great Bras d'Or Lake**, which we now traverse, has an extreme length, from the head of *West Bay* to the head of *East Bay*, of about 45 M., and an extreme width of about 20 M. Its depth varies from 90 ft. to 350 ft. The name is said to be, not French, but a corrupt form of an Indian or Spanish word (possibly from the same root as Labrador), sometimes locally pronounced 'Bradoore'. It is surrounded by agreeably diversified and wooded hills (5-600 ft. high), and Charles Dudley Warner describes it as more beautiful than he had imagined a salt-water lake could be. The combination of its sheltered inland position with the ozone of its salt-laden breezes makes the summer climate very delightful.

The course of the steamer lies almost due N. across the lake. To the left (S. W.) opens the *West Bay*, with its numerous islands. [On this bay is *Marble Mountain*, with limestone quarries affording material used by the Dominion Iron & Steel Co. (steamers, see p. 63).] To the right (N. E.) is the long *East Bay*, with the Micmac village of *Escasoni* near its head. To the W. (i.), beyond the *West Bay*, are *Malagawatch Harbour* and the estuary of the *Denys River* (comp. p. 63), the latter named for its discoverer Nicholas Denys, Sieur de Fronsac, who was afterwards appointed Governor of Cape Breton (1654). The only stop made by the steamer on the Great Bras d'Or is at the *Grand Narrows* (see p. 63), where it connects with the Little Bras d'Or Lake. The channel is crossed by the fine seven-spanned railway-bridge mentioned at p. 63. Passengers for Sydney must generally trans-ship here to the steamer plying from Iona (p. 63) to Baddeck (comp. pp. 63, 64).

The **Little Bras d'Or Lake**, excluding the long narrow arms connected with it, is about 10 M. long and 5-6 M. wide. Its

greatest depth is nearly 700 ft. Its attractions are similar to those of the Great Bras d'Or, but the smaller scale makes them even more fascinating. It 'offers many a charming vista of cliff where the gypsum mingles its white with the dark green of the overhanging spruce, and where the land rises into lofty hills, with their slopes dotted by cottages on little patches of meadow' (*Bourinot*). The steamer steers to the N., crosses the mouth of *St. Patrick's Channel* (1.; see below), and reaches —

Baddeck (*Telegraph Ho., Bras d'Or Ho.*, both mediocre, \$1½-2; *Mrs. Angus Mackenzie's*, well spoken of, \$1½), a village with about 1235 Highland inhab., situated on rising ground at the mouth of a pretty little bay. The name, accented on the second syllable, is a corruption of the French form *Bedeque*, from an Indian word *Ebédék*. The fame of this little village was made by Charles Dudley Warner in his amusing booklet 'Baddeck; and that Sort of Thing', and it is now frequented by quite a number of summer-visitors, in spite of whom it retains much of its native unsophistication. Both English and Gaelic services are still held in what Warner called the 'double-barrelled' church (Presbyterian). *Mr. George Kennan*, the Siberian traveller, has a cottage here; and *Mr. A. Graham Bell* (of the 'Bell Telephone') has built himself a beautiful summer-home on *Red Point*, immediately opposite the village, the red roof of which is conspicuous to the right as we approach the wharf. Many pleasant walks and drives may be taken from Baddeck, and the facilities for boating trips are unexcelled. Fair fishing for brook-trout, sea-trout, and salmon is within reach.

One of the pleasantest drives is that round the head of *Baddeck Bay* to (7 M.) *Mr. Bell's House* (see above) On the outskirts of the village we pass *Mr. Kennan's House* (1). This drive may be continued along the North Shore viâ *Cape Smoky* to *Ingonish* (p. 69) or even to *Aspy Bay* (p. 69). — Another pleasant round of about 10 M. may be made through *Baddeck River Valley* (falls). — A visit should also be made to **St. Anne's Bay*, which lies about 10 M. to the N. of Baddeck and has been highly praised by *Mr. C. D. Warner*. — A splendid drive of about 25 M. (carr. \$5) leads to *Whycocomagh*, which is, perhaps, better reached by steamer (see below) About 6 M. to the N. of Whycocomagh is *Lake Ainslie*, the source of the *Margaree*. — Another picturesque road (car, 25 M.) leads to the *Margaree River*, famous for its trout and salmon fishing *Margaree Harbour*, at its mouth, is one of the fishing-stations of the great Jersey firm, *Robin & Co.* (comp. p. 92). — The romantic *Usque-Ban Falls* (the highest 75 ft.) are reached from Baddeck (9 M.) by a good road. — About 12 M. above Baddeck is a *Micmac Reservation*; and in summer there are generally a few lodges of these Indians close to the village, where their peculiarities may be studied and their baskets and bead-work purchased. — The indefatigable traveller may also reach *Mabou* (*Murray Ho.*) and *Port Hood* from Baddeck by a stage-drive of 9-10 hrs. (50 M.)

The steamer to and from *Iona* (*Grand Narrows*; see p. 63) connects with the express-trains in both directions. — The steamer from *Sydney* (comp. p. 67) runs on from Baddeck up the beautiful *St. Patrick's Channel* and *Whycocomagh Bay* to (25 M.; fare \$1½, from Baddeck 75 c.) *Whycocomagh* (**Bay View*, fair, \$1½), a small village near the foot of the double-peaked *Salt Hill* (720 ft.). Opposite rises *Indian Head* (930 ft.). — A steamer also plies fortnightly in summer viâ *Grand Narrows* to *East Bay* (p. 65), calling at *Irish Cove* and *Big Pond*.

Leaving Baddeck Harbour, the Sydney steamer rounds *Red Point* (with Mr. Bell's house) and steers to the N.E. through the channel known as the *Great Bras d'Or*, which is about 22 M. long and about 1 M. wide. To the right lies *Boularderie Island*, 28 M. long and 2-3 M. broad, on the other side of which is the *Little Bras d'Or* or *St. Andrew's Channel*, which is 25 M. long and throughout a great part of its length 3 M. wide, the epithet 'little' apparently applying only to its narrow and tide-swept outlet on the Atlantic. The hills on the *Peninsula of St. Anne*, to the left of the Great Bras d'Or, attain a height of about 1000 ft. The steamer issues from the channel and reaches the Atlantic Ocean between *Cape Dauphin* on the left and *Table Head* on the right. To the N. lie the *Ciboux Islands*. We now have about 20 M. of open ocean, rounding *Point Aconi*, the N. extremity of Boularderie Island, before entering the mouth of *Sydney Harbour*, which we reach beyond *Cranberry Point*. As we ascend the harbour we see coal-mines on both sides of us. We first call at *North Sydney* (p. 68), which lies to the right, in the N.W. arm, and then ascend the S. arm, on the left, to *Sydney*.

Sydney. — **Hotels.** SYDNEY HOTEL, \$2½-3½; GRAND, near the station, \$1½; MINTO, QUEEN, both in Charlotte St., \$1½, ALFONSE, VICTORIA, George St., \$1½

Electric Tramways traverse the chief streets and run to (13 M.) *Glace Bay* (p. 49).

Steamers run from Sydney to *Baddeck* and *Whycocomagh* (Tues., Thurs., & Sat.; comp pp 64-66), to *Ingonish* and *Bay St. Lawrence* (see p. 69); to *Englishtown*, in *St. Anne's Bay* (27 M. to the N.W.; fare \$1), to *Quebec* and *Montreal* (p. 126), to *St. John's* (p. 109); to *Halifax* (p. 50), and to *St. Pierre* and *Miquelon* (p. 124).

U. S. Consul, Mr. George N. West, *French and German Consular Agents.* — *Sydney Lyceum* (theatre).

French gold and silver coins are often met with in Sydney, put into circulation by the crews of French men-of-war, which frequently visit the port in summer (comp p xi)

Sydney, an important seaport with (1901) 9909 inhab. (now ca. 14,000; including natives of the United States, Great Britain, Ireland, Germany, Scandinavia, Italy, Hungary, and China), is finely situated on the S.W. arm of one of the best harbours on the Atlantic coast, which, however, is ice-bound in some years for about two months. Its chief trade is in coal, iron, and steel, large quantities of which are produced in the district, but it also carries on a considerable general trade. From 1784 to 1820 Sydney was capital of the separate province of Cape Breton (comp. p. 62). It is frequently visited by vessels of the British and French North Atlantic Squadrons. The town has increased rapidly of late years owing to the enterprise of the Dominion Iron & Steel Co. (see p. 68). CHARLOTTE STREET is well and solidly built, including such substantial structures as the *County Court House*, the *Post Office*, the *Bank of Montreal*, the *Royal Bank of Canada*, the *Union Bank of Halifax*, and various business-blocks. The harbour affords excellent yachting, and many pleasant drives may be taken in the vicinity (c.g.

to Forks Lake, Sydney River, and Crauley's Creek). The Royal Cape Breton Yacht Club holds a weekly regatta in summer. Sydney is also the starting-point for a visit to Louisbourg (see p. 69). At the end of the peninsula is Victoria Park (fine view), with the remains of the barracks of the garrison formerly maintained here. The Dominion Steel Works, recently established near Sydney, cover over 600 acres of land and employ more than 3000 men. There are also large tar, chemical, cement, and nail works.

'Every visitor should see a cast made (at the Dominion Steel Works). At night, as the molten slag rushes out and is conveyed to the water front, the scene is one of strangely weird fascination. Seen from the deck of the ferry steamer it reminds one of the infernal regions. The sky is suddenly illuminated with the red blaze, throwing into striking relief the huge furnaces and chimneys, and making the silvery radiance of the innumerable electric lights pale into insignificance. A stream of molten lava is then seen descending the slope to the harbor, and when its fiery heat is cooled in the water, clouds of snowy steam ascend from it.' (A. N. Vernon.)

Sydney Harbour was originally named *Spanish Bay*, and has been known to British navigators since the 16th century. Le Moyne d'Iberville, founder of Louisiana, sailed hence in 1692 on his expedition to the Bay of Fundy and the coast of Maine. Adm. Walker took refuge here after his pusillanimous withdrawal from the expedition against Quebec in 1711 (p. 147) and asserted the British claim to Cape Breton by erecting a wooden cross, with an inscription, on the shore. A naval contest off the mouth of the harbour in 1781 resulted in the defeat of four small British vessels by two French frigates. The town of Sydney was founded in 1784. — In 1905 the harbour was entered and cleared by 3600 vessels of 1,446,546 tons' register.

One of the pleasantest drives from Sydney is that along the low cliffs overhanging the harbour to (12 M.) *Low Point Lighthouse*. Another may be taken along the S. W. Arm. Short steamer-trips can be made to the *Little Bras d'Or*, *St. Anne*, etc.

From Sydney a steam-ferry plies hourly across the harbour to (5 M.) *North Sydney* (Belmont, \$ 2, Vendome, Albert, \$ 1½), another coal-shipping port with (1901) 4646 inhab. and a long pier. Steamer to Newfoundland, see p. 102; to St. Pierre and Miquelon, see p. 124. Steamers also ply to Montreal, Quebec, Halifax, Charlottetown, and St. John's. For the Bras d'Or steamers, comp. p. 67.

A 'pleasant drive may be taken across the peninsula to the shore of the Little Bras d'Or, whence we may return via *Sydney Mines* (see below) and along the harbour. Another good drive leads along *George's River* to *Long Island* and *Barachois*.

From North Sydney the electric tramway runs to the E. to (3 M.) *Sydney Mines*, a coal-mining place with (1901) 3191 inhab. (now 7000), coal-mines, and the blast-furnaces of the Nova Scotia Steel and Coal Company. The rows of the one-story houses of the miners, built of brick with old-fashioned panes of glass, present a quaint appearance. The tramway between North Sydney and Sydney Mines skirts the harbour, of which it commands a fine view, while in the evening a brilliant and weird effect is produced by the furnaces of the Dominion Steel Company on the opposite side of the harbour. — *Lloyd's Cove*, to the E. of Sydney Mines, has the receiving hut of the Western Union Cable Company.

A STEAMBOAT of the Bras d'Or Co., leaving the Sydneys on Tues. and Fri., plies to the N. along the coast, visiting some of the finest scenery

in Cape Breton (fare to Ingonish \$1.25, to Neil's Head \$1.50, to Aspy Bay \$1.75, to Bay St Lawrence \$2). At a distance of about 28 M. in a straight line from North Sydney we reach *Old Smoky Head (Cap Enfumé)*, rising to a height of 1200 ft and so called from the smoke-like cloud of mist which often envelops its summit. On doubling the cape we reach the lovely village of *Ingonish* or *Inganiche*, situated on the so-called *North* and *South Bays*, separated by *Middle Head*. A narrow sand-bar separates the outer part of South Bay from the dark waters of the inner harbour, and the houses on this spit were almost wholly destroyed by wind and wave in two terrific storms in the winters of 1894 and 1895. Among the lofty hills surrounding the bays is *Frane's Chimney* (1392 ft), the highest point in Cape Breton — Beyond Ingonish the steamer goes on to (47 M. from Sydney) *Neil's Head* and (on some trips) to (59 M.) *Aspy Bay* and (70 M.) *Bay St Lawrence*, at the extreme N. end of the island, where the scenery vies with that of Ingonish. — Comp. 'From Blomidon to Smoky', by *Frank Bolles* (1894).

The *Sydney Coal Fields* cover an area of about 300 sq. M., besides which the deposits are known to extend for 5 M. under the sea. It is estimated that the total quantity of coal in this area amounts to at least 10 billion tons, and its value is enhanced by its proximity to the harbours of Sydney and Louisbourg. The coal, the first cargo of which is said to have been shipped to Martinique in 1735 and which has been more or less regularly worked since 1784, is of an excellent bituminous quality, and is readily sold at a remunerative price. In 1905 the total yield of the Sydney district was fully 4,000,000 tons. About 11,000 men are employed in the mines. The *Dominion Coal Co.*, a syndicate of Canadian and United States capitalists, with its headquarters in Montreal, has acquired most of the working mines in the district to the S. of Sydney, while the peninsula of N. Sydney is practically owned by the *Nova Scotia Steel & Coal Co.* (formerly the *General Mining Association*). The chief pit of the former organization is *Dominion No. 2 Colliery* (with the largest coal-shaft in the world), while the oldest coal-pit is that of the *Nova Scotia Steel & Coal Co.*, Sydney Harbour, the workings of which extend a long way under the sea, the vessels which enter the harbour passing over them. This pit, which yields 600,000 tons of coal annually, is the deepest in the neighbourhood and will repay a visit

Louisbourg.

FROM SYDNEY TO LOUISBOURG, 42 M., railway in 1½ hr. (return-fare \$1.20). This railway follows the coast-line pretty closely, while the direct distance by road is only 24 M. At or near most of the stations are large coal-mines worked by the Dominion Coal Co (see above). 10 M. *Dominion*; 12 M. *Caledonia*, 13 M. *Bridgeport* — 15 M. *Glace Bay (Hotel, \$1½-2)*, with a fine beach, has recently progressed very rapidly owing to its coal-pits, and in 1901 contained 6945 inhab. (now 12,000). The annual production of its mines now amounts to 3,000,000 tons. A little to the S.W. of Glace Bay is a station of the Marconi Wireless Telegraph, from which the first message from Canada to England (addressed by Governor-General Minto to King Edward) was despatched on Dec. 21st, 1902. Glace Bay may also be reached from Sydney by electric car (p. 67) — 22 M. *Port Morien*, formerly known as *Cow Bay*, has an excellent beach and a good harbour, protected by a breakwater constructed at a cost of \$250,000. Pop. (1901) 1453 — At (29 M.) *Mira* we cross the *Mira River*, between *Mira Lake*, on the right, and *Mira Bay*, on the left. During the summer season a small steamer, connecting with the trains of the Sydney and Louisbourg Railway, plies up the picturesque Mira for a distance of about 30 M. *Sangaree Island* has a good bathing-beach. The river has also much of historic interest, with remains of old French brick-kilns, abandoned sloops, and burying-grounds. The 'tuna' occurs in Mira Bay and at the mouth of the Mira River, affording excellent sport to fishermen. — 33 M. *Catalone*, on *Catalone Lake*. To the S.E. of the last lies *Cape Breton*, from which the island takes its name (see p. 62); and offshore lies the island of *Scatarie*, the easternmost part of the Maritime Provinces — 42 M. *Louisbourg*, see p. 70.

The present town of Louisbourg (*Louisbourg Hotel; McAlpine Ho ; U S. Agent*) lies near the middle of *Louisbourg Harbour*, a safe and deep haven, 2 M. long and $\frac{1}{2}$ M. wide, lying about 6 M. to the S. of Cape Breton. Close by are the remains of the so-called Grand Battery, while the remains of the fortified city of the French era are on the S. W. arm of the bay. Its inhabitants, about 1600 in number, were formerly mainly engaged in the cod-fisheries of the Banks of Newfoundland, but since the construction of the railway the place has become a large coal-shipping port. Two French cannon, recovered from a sunken man-of-war in the harbour, are now kept in an enclosure near the railway-station.

History. By the Treaty of Utrecht (1713) France was left in possession of the island of Cape Breton, the importance of which, as the key to Canada, the French determined to emphasize by the construction of a fortress of the first rank. The bay then known as the *Havre-aux-Anglais* was chosen as the site of the new city, and over \$10,000,000 were expended in gigantic fortifications. The population grew rapidly, mainly by the concourse of the French from Newfoundland and the Acadians from Nova Scotia, and Louisbourg soon became a name and place of great significance. It was the American rendezvous of the French navy and the headquarters of a fishing-fleet employing large numbers of men. On the outbreak of the war of 1744 the New England settlements determined to attack this 'Dunkirk of America', a standing menace to their trade and fisheries; and an expedition of 4300 men, under William Pepperrell, a merchant of Kittery, was fitted out in 1745 for the purpose. To the amazement of the world this force of Colonial militia, with the co-operation of the British West Indian Squadron under Commodore Warren, succeeded in capturing the supposed impregnable fortress after a siege of seven weeks — one of the most extraordinary feats in the annals of warfare. Pepperrell was created a baronet for his services. Louisbourg was, however, given back to France by the Treaty of Aix-la-Chapelle (1749). War broke out again in 1756, and in 1758 an army of 11,600 men and a powerful fleet were sent out from England to operate against the French in Canada. This expedition entered *Gabarus Bay*, to the S. of Louisbourg, where Pepperrell had also landed, in June, and two months later, in spite of all that had been done to strengthen it against such an emergency, the city was surrendered once more, with 5600 prisoners-of-war and a large quantity of naval and military stores. Wolfe commanded one of the divisions of the British army and greatly distinguished himself in the siege. As Halifax had been selected as the British military headquarters for the Acadian provinces, the works of Louisbourg were entirely destroyed and its site deserted.

The ruins of the French city and fortress lie on *Point Rochefort*, on the S. W. side of the harbour. The destruction by man and time has been so complete that comparatively little now remains to outward view.

'Green mounds and embankments of earth enclose the whole space, and beneath the highest of them yawn arches and caverns of ancient masonry. This grassy solitude was once the 'Dunkirk of America'; the vaulted caverns where the sheep find shelter from the rain were casemates where terrified women sought refuge from storms of shot and shell, and the shapeless green mounds were citadel, bastion, rampart, and glacis. Here stood Louisbourg; and not all the efforts of its conquerors, nor all the havoc of succeeding times, have availed to efface it. Men in hundreds toiled for months with lever, spade, and gunpowder in the work of destruction, and for more than a century it has served as a stone quarry, but the remains of its vast defences still tell their tale of human valor and human woe' (*Parkman*).

'If we take a position on the site of the King's bastion, the most prominent point of the ruins, we see to the southwest the waters of the spacious bay of Gabarus. Immediately below us are the remains of the casemates where the women and children found a refuge during the last siege. . . . It is quite easy to follow the contour of the fortifications until they come to the old burying-grounds near Rochefort and Black Points, where hundreds of New Englanders and of French and English soldiers found their last resting-place in 1745 and 1758. No tombstone or cairn or

cross has been raised, the ground has never been blessed by priest, the names of the dead are all forgotten; Frenchmen, Englishmen, and Colonists, Catholics and Puritans, now sleep in close proximity to each other, regardless of the war of creeds, beneath the green sward' (*Bourinot*).

The British lines in 1758 formed a semicircle round the city on the W., the *Burying Ground*, above referred to, lies to the E of the city, near the extreme point. One of the strongest works was on the island in the mouth of the harbour, but it was silenced by Wolfe with a battery, of which the remains may still be seen on *Lighthouse Point*, the N.E. arm of the harbour.

A simple monument to commemorate the capture of Louisbourg was erected here by the Society of Colonial Wars in 1895.

A small steamer plies in summer to the interesting fishing-village of *Gabarus* (1116 inhab.), to the S.W. of Louisbourg (comp. p. 70).

Visitors to Louisbourg should be familiar with *Parkman's* account of the two sieges, given in 'A Half-Century of Conflict' (chaps xviii-xx) and 'Montcalm & Wolfe' (chap xix). See also *Bourinot* (Op. cit., p. 62), *Vernon* (Op. cit., p. 62), and *Kingsford's* 'History of Canada' (vols iii and iv). Perhaps the fullest account of the second siege is in the *Abbé Casgrain's* 'Lévis et Montcalm' (Quebec, 1892).

20. From Halifax to St. John.

a. Via Digby.

DOMINION ATLANTIC RAILWAY to (150 M.) *Digby* in 4³/₄-6 hrs (fare \$4 10; parlor-car \$1), and *Steamer* of the same company thence to (ca. 50 M.) *St. John* in 2³/₄-3 hrs (through-fare \$5 75).

The railway traverses the picturesque 'Evangeline' district, rich in historic and poetic association, and the traveller will do well to stop off for a night or more at Wolfville and Kentville. The railway is well equipped, and its officials are notably courteous. The 'Flying Bluenose' express leaves Halifax, under present summer arrangements, daily at 8.30 a.m. Beyond Digby the railway goes on to *Yarmouth*, to which through-carriages run from Halifax (comp p. 78). — The run across the *Bay of Fundy* is seldom rough in summer, and the steamer is large, speedy, and safe — The traveller may dine or lunch either in the buffet-car or on the steamer *Notman* (comp p. 127) publishes good photographs of this route.

From Halifax to (14 M.) *Windsor Junction*, see p. 83. Our line here diverges to the left from the route to Moncton and Quebec (R. 24) and runs towards the N.W. Beyond (27 M.) *Mt. Uniacke*, to the right, is *Uniacke Place*, an old-fashioned house between two small lakes. About 3¹/₂ M. to the N are the small *Mt Uniacke Gold Mines*. — To the left lies the pretty *Five Island Lake*. — 37 M. *Ellershouse* was founded by a German, Herr von Ellershausen, whose fine house stands to the left, and has lost its prosperity since his departure and the closing of his pulp-mill — *Mt. Ardoise* ('Ardice'; 700 ft.) may now be seen rising to the right. We cross the picturesque *St. Croix*. 40 M. *Newport*, with gypsum-quarries. As we enter Windsor we see King's College (p. 72) on the hills to the left. The grass-works of old Fort Edward (p. 72) rise just above the station, on the same side.

46 M. *Windsor* (*Victoria*, \$1¹/₂-2; *Clifton* or *Sam Slick Ho.*, \$1¹/₂; U. S. Consul, *Mr. J. T. Hoke*), a prosperous little town and port, with (1901) 3398 inhab., lies on a point between the *Avon*

and the *St. Croix*, which unite in a wide estuary below the town as they flow (under the name of Avon) into the *Bay of Minas*. It takes the third place among the ship-owning ports of Canada (108 vessels of 45,276 tons in 1906) and exports large quantities of gypsum from the quarries of the vicinity. The town also contains an iron-foundry, a cotton-mill, a plaster-mill (for grinding and calcining plaster), and other factories. It is the seat of *King's College* (see below). — In 1897 Windsor was visited by a terrible conflagration, which swept away 400 buildings, destroyed property to the value of \$3,000,000, and left three-fourths of its inhabitants homeless.

To reach King's College we follow *Water St* from the station to (3 min.) *Gerrish Street*, which we follow to the left, passing the *Post Office*, to (2 min.) *Gray Street*. Here we turn to the right and at the (3-4 min.) cross-roads take the second road to the left, with the plank side-walk. In about 3 min. more a gateway to the right, with a small lodge, admits us to the grounds surrounding the *Clifton* or *Sam Slick House* (now a hotel, p. 71), an unpretending wooden cottage which was the home of *Judge Thomas C. Haliburton* ('Sam Slick', 1797-1865), a native of Windsor. (By crossing the field in front of the house we reach a view-commanding path, high above the Avon, by which we may return to the town.) — Continuing to follow the plank-walk from the entrance to the 'Sam Slick House', we reach, passing a bridge over a ravine with some disused plaster-quarries and through two gates, the (10 min.) plain old wooden building of *King's College*, with its Ionic portico. This college was chartered by George III. in 1783 and is now attended by a mere handful of students. The library and chapel are of stone. A good view is here obtained of the town and its rivers. Close by are the *Collegiate School*, for boys, and *Edgehill*, a church-school for girls (75-100 pupils). — Other good points of view are the cupola of the *Court House*, a conspicuous red building on an adjoining hill, and the grassy ramparts of the abandoned *Fort Edward* (1759), just above the station.

Windsor, the Indian name of which was *Pigiguit* or *Pesiquid* ('junction of the waters'), was a thriving Acadian settlement before the expulsion of 1755 (see p. 73).

From Windsor to *Tiuro*, see R. 23

The railway runs through Windsor on the street-level and in quitting it crosses the wide Avon by an iron bridge 1400 ft. long. To the right is the road-bridge. The beauty of the view here depends largely on the state of the tide. At full tide we see a large and powerful river, with waters of a strange reddish hue; at low tide there is little but slimy expanses of red mud — 'an ugly rent in the land' — recalling, though on a larger scale, the similar effects on the English Avon, at Bristol. We now leave the Avon for a little, but regain it near (53 M.) *Hantsport* (American Hotel, \$1¹/₄), a small but busy little ship-building port. Its shipping is owned almost entirely by the *Messrs. Churchill*, among the wealthiest and largest ship-owners in the Dominion. We now skirt the wide estuary of the Avon, enjoying fine views, on our right front, over the *Minas Basin*. As we near (58 M.) *Avonport*, the bold *Cape Blomidon* (see p. 74) comes into prominence on the W. side of the basin, forming the dominant scenic feature for the next 10 M.

We now turn to the left (W.), leave the Avon, and cross the

mouth of the *Gaspereau* at (60 M.) *Horton Landing*. The high tide of the Bay of Fundy (p. 76) is well exemplified at the wharf here — We then traverse the **Cornwallis Valley*, the beginning of the so-called '*Garden of Nova Scotia*', with its extensive fruit-orchards and fertile pastures. In the blossoming season this is a veritable paradise. We have also reached the 'Land of Evangeline' (see below). At (61 M.) *Grand Pré* we see, to the right, a group of old willows marking the site of Evangeline's village

64 M. *Wolfville* (*Acadia Seminary Hotel*, well spoken of, \$2-2½; *Royal*, \$2; **Kent Lodge*, \$2; *Acadia Villa*; *Hillside Hall*, \$2), a small town with (1901) 1412 inhab., engaged in ship-building and farming, is the best centre from which to visit the 'Evangeline District', though it still lacks a first-class hotel. It is the seat of an important *Horticultural School* and of *Acadia College*, a flourishing Baptist institution (co-educational; 150 students), situated on a hill at the W. end of the village. The *View from the front-steps of the latter (or, still better, from its belfry) includes the Cornwallis Valley, backed by the North Mt. (p. 74), ending in Cape Blomidon, the Minas Basin (p. 85), and the meadows of Grand Pré (see below). The village seen to the N., across an arm of Minas Basin, is Kingsport (steamer, see p. 74). Near Acadia College are *Schools* for girls and boys and a *Manual Training Hall*.

Evangeline District. The following round-drive of 10-12 M. will give a very fair idea of the district celebrated by Longfellow in 'Evangeline' (fare for 1-2 pers. about \$2, 3-4 pers \$3). — We ascend to the top of the ridge behind the town and follow the road along it towards the E. Behind this ridge lies the beautiful **Gaspereau Valley*, recalling to some extent the valley of the Dee, near Aberdeen, and the traveller should alight from his vehicle, near the little French burying-ground, and walk to the brow of the hill, in order to enjoy the view. Large quantities of the small fish called 'gaspereaux' or 'alewives' (*Alosa vernalis*; a kind of herring) are taken in the winding Gaspereau, for export to India; and trout may be caught in Gaspereau Lake. Numerous orchards are seen, forming a lovely sight in the blossoming season (first week in June) — After following the ridge for 2½-3 M. we descend to the left towards the hamlet of Grand Pré, passing the cross-roads supposed to be the site of 'Basil's Forge'. The site of the French village, close to the station (see above), is marked by a clump of venerable willows, an old well, and the cellars of a few cottages. From this point we may drive to the N., across the expanse of fertile dyked meadows that gave name to the village; and the heart of the agriculturalist will rejoice in the splendid crops of hay with which they are covered. To the right, near *Horton Landing* (see above), is the point where the Acadians embarked on their expulsion. Ahead of us we obtain fine views of *Cape Blomidon* (p. 74), across the Minas Basin. On the seaward side of the 'Great Meadow' is *Long Island*, a fertile ridge occupied by near a score of small farms, but no longer an island since the construction of reclaiming dykes. If desired, we can here drive right down to the beach before returning to Grand Pré Station and so back to Wolfville by the lower road. The reader of 'Evangeline' must be warned that he need not look for 'the forest primeval — the murmuring pines and the hemlocks'.

The Expulsion of the Acadians in 1755 has been represented by Parkmen and other authorities as a simple act of self-preservation on the part of the British on account of their irreconcilable hostility to British rule. Recent researches made by *Dr. Doughty* (pp. lxi, 147) seem to prove

pretty conclusively that this was not the case. The expulsion was rather the work of arbitrary provincial authorities (Cornwallis and Lawrence), who apparently acted without the knowledge of the Home Government, declined to recognize the pledge given to the Acadians that they should not be called on to bear arms against the French or Indians, and refused them permission to emigrate elsewhere — Comp. also the histories of Acadia by *Hannay* and *Edouard Richard*. The 'Story of Acadia', an extract from Hannay's history, is distributed gratis by the Railway Co.

Another historic association with Grand Pré is the surprise, defeat, and capture of the Massachusetts regiment of Col Noble by the French in 1747 (see *Parlman's* 'Half-Century of Conflict', chap. xxii)

A favourite drive from Wolfville leads through the fertile *Cornwallis Valley*, passing *Port Williams* (see below), to (13 M) the point called the 'Look-Off', which affords a fine view over the Minas Basin. From this point the drive may be prolonged for about 8 M to the top of *Cape Blomidon* (see below). The farms in the *Cornwallis Valley* are larger and more pretentious than those of the *Gaspereau Valley*.

Beyond Wolfville the train ascends along the *Cornwallis River*, views of which are obtained to the right. 66 M *Port Williams* (Port Williams Hotel, Village Ho., \$1), considerably to the right of the railway.

71 M. *Kentville* (*Aberdeen Hotel*, near the station, \$2; *Porter*, \$2; *American*, \$1 $\frac{1}{4}$; *Rail. Restaurant*) is a very attractive little town of (1901) 1731 inhab., on the *Cornwallis River*, with the headquarters of the Dominion Atlantic Railway and several mills and factories. Excellent fishing and shooting are obtained in the vicinity.

FROM KENTVILLE TO KINGSPORT, 14 M., railway in $\frac{3}{4}$ hr. (fare 47 c) — This branch-railway descends the fertile *Cornwallis Valley* (comp p. 73), between rows of apple-trees, to (11 M) *Canning* (Waverley, \$1 $\frac{1}{2}$) and (14 M.) *Kingsport* (Central Ho., \$1 $\frac{1}{2}$). Canning may be made the starting-point of a delightful drive to the 'Look-Off' (comp above) and (9 M) *Cape Blomidon*, the massive promontory, 670 ft high, in which the *North Mountain* (see p. 75) ends ('View from the top'). A small steamer plies weekly (Mon) from Canning to St John (p. 27). *Kingsport*, with its fine sandy beach, nestles in a recess of Minas Basin and promises to become a favourite seaside-resort.

A very charming excursion may be made from *Kingsport* by the daily steamer of the *Dominion Atlantic Railway Steamship Line* to *Parrsboro* (1 $\frac{1}{2}$ hr.) The boat passes close to the foot of *Cape Blomidon*, affording the best view of this majestic promontory. Between *Blomidon* and *Cape Sharp*, where the strait between the Minas Bay and Minas Channel is only 4 M wide, the tide rushes with tremendous velocity. Away to the W lies *Cape Split*, twisted into its present position, says Micmac legend, by the demigod *Glooscap*, whose favourite haunt was the Basin of Minas. As we approach *Parrsboro* (see p. 85) we obtain a good view of the rugged Cumberland coast, off which lie the *Five Islands* (p. 85), while in the background rise the *Cobequid Hills* (p. 85). From *Parrsboro* the steamer crosses the Basin of Minas to *Wolfville* (p. 73).

Stage-coaches run twice weekly (Tues. & Frid.) from *Kentville* to (25 M) *New Ross*, where they connect with another line for (21 M) *Chester* (p. 78), passing *Gaspereau Lake* and running through a picturesque district to the Atlantic Coast. — Other pleasant drives may be taken to (11 M) *Hall's Harbour*, to (13 M) *Baxter's Harbour*, and to (16 M.) *White Waters*. *Hall's Harbour*, which is a good place to witness the Bay of Fundy tide (p. 76), is named from a landing made here by an American privateer in the war of 1812.

Beyond *Kentville* the train passes through a fruit-growing district, with several small stations. Near (83 M.) *Berwick* (*Berwick*,

Old Homestead, \$1 $\frac{1}{4}$), with its camp-meeting grounds, we pass from the Cornwallis Valley to the ***Annapolis Valley**, the 'Garden of Nova Scotia'. From (58 M.) *Aylesford* a coach runs to the S, passing the *Aylesford Lakes*, to *Dalhousie* — 98 M *Wilmot* is the station for the *Wilmot Spa Springs* (Hotel, unpretending), 3 M to the N, and the junction of a branch-line to the (3 $\frac{1}{2}$ M.) *Torbrook Iron Mines*. — 102 M **Middleton** (*Middleton, Spa*, \$1 $\frac{1}{2}$; *Rail. Restaurant*), with (1901) 969 inhab., is the junction of the *Halifax & South Western Railway* (see p 77). A pleasant drive may be taken hence to *Margaretsville* and *Port George*, on the Bay of Fundy.

Beyond Middleton, the Annapolis Valley, clearly defined by the ridge of the *North Mountain* (500-700 ft.) to the right and that of the *South Mountain* (300-800 ft.) to the left, is very attractive, especially in the apple-blossom season (early in June). The *Annapolis River* flows to the left. 108 M *Lawrencetown*. At (111 M) *Paradise*, over the name of which Mr. C. D. Warner makes some perfectly uncalled-for merriment, we cross the river, which now flows to the right and rapidly increases in width — 116 M. *Bridge-town* (Grand Central Hotel, St. James, \$1 $\frac{1}{2}$), a small town with (1901) 858 inhab., at the head of navigation on the Annapolis River. To the left lies *Bloody Brook*, the scene of a massacre of New England troops by the French and Indians. Between this point and Annapolis we have delightful views to the right over the widening and winding river, with the hills beyond. — 124 M. *Roundhill*.

130 M. **Annapolis** or *Annapolis Royal (Hillsdale, Queen*, \$2, *Clifton, American, McLeod*, \$1 $\frac{1}{2}$; *U. S. Agent*), a small seaport with (1901) 1019 inhab., finely situated at the head of *Annapolis Basin*, is the oldest European settlement in America to the N. of Florida (see below). It carries on a brisk trade in fruit, and is frequented by summer-visitors for its scenery and pleasant climate. The chief lion is the old *Fort*, now dismantled, which dates back to the 17th cent. and covers nearly 30 acres of ground. Like *Fort Edward* (p. 72), it is Dominion property. The grassy ramparts command a charming *View over Annapolis Basin. A monument was erected here to the *Sieur De Monts* (see below) in 1904. Some of the older houses are quaint and picturesque, but none date from the French period.

De Monts and Champlain visited Annapolis Basin in 1604, and the *Baron de Poutrincourt*, a member of the expedition, was so impressed with the charms of nature here that he secured a grant and named it *Port Royal*. In the following year the survivors of the ill-fated settlement of St Croix Island found refuge at Port Royal, and in 1606 *Lescaubot* arrived from France with a fresh body of settlers. The colony was abandoned in 1607 on the revocation of De Monts' privileges by the King of France. In 1610, however, Poutrincourt led another expedition to Port Royal, which flourished for a time, living on the most friendly terms with the Indians and converting a number of them to Christianity. This promising colony was destroyed in 1613 by a Virginian expedition under Argall, at the instigation of the Jesuits, with whom De Poutrincourt had quarrelled. The site lay vacant for some years, but was ultimately re-occupied by

the French; and its history for the next century and a half is an endless record of attack, capture, and recapture, which prevented the place acquiring anything beyond strategic importance. It was from Port Royal that Charnisay sailed to attack La Tour at St. John (see p. 29). In 1710 Port Royal was finally captured by the New Englanders and re-named Annapolis (after Queen Anne), but their tenure of it was very precarious until after the expulsion of the Acadians in 1755. The last warlike scene took place here in 1781, when two American cruisers captured the fort and plundered the town.

Beyond Annapolis the railway runs towards the S.W., skirting the shore of the fine ***Annapolis Basin**, which, 16 M. long and $1\frac{1}{2}$ -5 M. wide, is enclosed between the 'gracefully moulded and tree-covered' heights of the *North and South Mountains* (see p. 75). In mid-channel lies *Goat Island*. We have a good view of the old fort to the right as we leave the town. 138 M. *Clementsport*, at the mouth of the *Moose River*, a village of 800 inhab., near which are iron-mines. At (144 M.) *Bear River* (Hotel, \$ $1\frac{1}{2}$) we cross the stream of that name by a bridge 90 ft. high and nearly $\frac{1}{2}$ M. long. This district is famous for its cherries. The train now sweeps to the right (N.), round the S.W. end of Annapolis Basin, and reaches —

150 M. **Digby** (*The Pines*, \$ 2-5; *Myrtle Ho*, \$ $2\frac{1}{2}$ -3 $\frac{1}{2}$; *Manhattan*, \$ 2-3, *Trefry Ho.*, \$ $1\frac{1}{2}$ -2, well spoken of; *Dufferin*, \$ $1\frac{1}{2}$ -2, *Waverley*, \$ $1\frac{1}{2}$, *Rail. Restaurant*; *U. S. Agent*), a popular little watering-place on Annapolis Basin, near *Digby Gut* (see below), with (1901) 1150 inhab. and a long pier. The bathing, boating, and fishing are good. Excursions are made to Digby in the fruit-season for the sake of its cherries (July), while its herrings, known as 'Digby Chickens', are famous throughout the Acadian provinces.

The so-called *Bear River Drive* from Digby (fare \$ $2\frac{1}{2}$) leads through the Acacia Valley and back by the Bear River. — Another interesting drive may be taken to the *Lighthouse* (see below; fare \$ $2\frac{1}{2}$).

Passengers for St. John change carriages at Digby and take the transfer-train to the pier, where they board the steamer '*Prince Rupert*', which belongs to the Dominion Atlantic Railway Co. This fine boat performs the run to (50 M.) St. John in $2\frac{3}{4}$ -3 hrs.

On leaving Digby, the steamer passes out into the Bay of Fundy by the curious ***Digby Gut**, a gap or cleft in the North Mountain, 2 M. long and $\frac{1}{2}$ M. wide, with steep rocky sides 400-600 ft. high. The tide rushes through here with great velocity, and it is also usually swept by strong winds. On either side are small fishing-hamlets, and on *Point Prim*, to the left, is a lighthouse. To the right is *Victoria Beach* (p. 77) — The **Bay of Fundy**, which we now cross (from Digby Gut to St. John, 45 M.), is a gigantic inlet of the Atlantic Ocean, 170 M. long and 30-50 M. wide, between the S.W. arm of Nova Scotia and the opposite coast of New Brunswick. The name is probably derived from the Portuguese '*Baya fundo*' (deep bay).

'The Bay of Fundy is celebrated for its tides, which are probably the highest in the world, the difference between high and low water being from 40 to over 50 feet in some places. At low tide muddy flats, often miles in extent, are laid bare, and the long estuaries of the rivers and

streams are completely drained. The extraordinary height of the tides in this bay is due to its funnel-shaped form, and is greatest towards its narrow upper extremities, where in some places a dangerous broken wave or 'bore' is produced by the rising water (*G. M. Dawson*).

As the steamer advances, we enjoy a good retrospect of the long ridge of the North Mt (p. 75). To the left are the *Lurcher Rocks*, marked by a lightship. As we approach the New Brunswick coast, *Cape Spencer*, with its lighthouse, appears to the right. Farther on, on the same side, is *Mispec Point*, beyond which we enter the fine *Harbour of St. John*, passing *Partridge Island*, with its light, on the left. On the W. (1) side of the harbour is *West St. John* or *Carleton*, with its church-spires, grain-elevator, and martello tower. Our steamer lands at the new pier at *Reed's Point* (Pl. D, 3).

St. John, see R. 10

b. Viâ Mahone, Bridgewater, Middleton, and Victoria Beach.

HALIFAX & SOUTH WESTERN RAILWAY to (175 M.) *Victoria Beach* in 6 hrs (fare \$5.75). The railway part of this route was opened in the autumn of 1906.

From Halifax to (70 M.) *Mahone* and (81 M.) *Bridgewater*, see R. 21a. Our line now diverges to the right from that to Yarmouth (R. 21a) and runs towards the N. 92 M. *Riversdale*. From (98 M.) *New Germany*, a German settlement, a branch-line runs to (15 M.) *Brookfield Mines* (gold) and (22 M.) *Caledonia*, near Lake Rossignol (p. 79) and *Fairy Lake* (good fishing). 105 M. *Cherryfield*; 108 M. *Springfield*; 126 M. *Alpena*, not far from *Fales Lake*; 131 M. *Nictaux*, near the *Nictaux Falls* and the *Torbrook Mines* (p. 75).

At (136 M.) **Middleton** (p. 75) we cross the Dominion Atlantic Railway (R. 20a). — Our line now bends to the left and runs towards the W. along the N. side of the *Annapolis River* and *Basin* (pp. 75, 76), parallel with the Dominion Atlantic Railway. 144 M. *Clarence*; 149 M. *Bridgetown* (p. 75), 153 M. *Upper Granville*, 159 M. *Granville Centre*; 163 M. *Granville Ferry*, opposite *Annapolis* (p. 75), 168 M. *Karsdale*, named in honour of the heroic defence of Kars in 1855 by *Sir William Fenwick Williams* (1800-83), a native of Annapolis.

176 M. *Victoria Beach* (p. 76) is a rising watering-place on the E. side of *Digby Gut* (p. 76).

c Viâ Moncton.

275 M. *Intercolonial Railway* in 9-12 hrs. (fare \$6, parlor-car \$1, sleeper \$2). By this route travellers can pass between Halifax and St. John by land, without change.

The places passed on this route have been already described. From Halifax to (186 M.) *Moncton*, see pp. 83-87; from Moncton to (275 M.) *St John*, see p. 48.

21. From Halifax to Yarmouth.

a. By Halifax and South Western Railway.

247 M HALIFAX & SOUTH WESTERN RAILWAY. This new line was not yet open for through trains when the Handbook went to press, but trains were running between *Halifax* and *Liverpool* (p. 79) and between *Barrington* (p. 80) and *Yarmouth* (p. 80). The through-fare will be about \$6, while the time taken will be about 7 hrs.

Halifax, see R. 18. On leaving the city the railway diverges to the left from the Intercolonial Line to Moncton (R. 24) and the Dominion Atlantic Railway to Digby (R. 20a), at the point where the Narrows broaden into Bedford Basin, and runs toward the S.W. To the left are seen the dome of the exhibition building, the citadel, and the N.W. Arm. The line at first traverses a rough country, necessitating many heavy stone cuttings, past numerous lakes (left) from which Halifax receives its excellent water-supply, and at (20 M.) *French Village* reaches the beautiful *St. Margaret's Bay*. It skirts the shore of the bay, affording fine views to the left and passing (24 M.) *St. Margaret's Bay Station* and (29 M.) *Ingram Port*. Beyond (35 M.) *Hubbards* (Gainsborough, well spoken of, \$11½; Somerset, \$11½), a delightful summer-resort, the railway leaves *St. Margaret's Bay* and proceeds through a wooded district to (42½ M.) *East River*, on the E. shore of *Mahone Bay*. At (48 M.) *East Chester* the isles of Chester Basin begin to appear, said to equal in number the days of the year.

51 M. *Chester* (*Hackmatack Inn*, \$3½; *Lovett Ho*, \$2) is prettily situated on a hill, overlooking Mahone Bay, and is a fashionable Nova Scotian summer-resort on account of its scenery, boating, bathing, and fishing (sea and fresh water). The village was founded by New Englanders in 1760 and now contains about 1800 inhabitants. *Mt. Aspotogan* (500 ft) is a fine view-point. — About 4 M. to the S.W. is *Oak Island*, firmly believed by many to be the repository of Capt. Kidd's Treasure. Various companies have been formed to dig for the gold.

The line continues to encircle the shore, passing (56¾ M.) *Chester Basin* (Bay View, \$1), until at (60 M.) *Western Shore* we get a view of Chester to the left, directly across the beautiful bay. — 70 M. *Mahone* or *Mahone Bay* (Royal, \$1½; Aberdeen, \$1) is a small town charmingly situated at the W. end of Mahone Bay.

FROM MAHONE TO LUNENBURG, 7 M., branch railway in ½ hr. — *Lunenburg* (*King's Hotel*, \$2; U.S. Agent, *Mr. D. M. Owen*), a prosperous seaport on *Lunenburg Bay*, with (1901) 2196 inhab., was settled in 1753 by German immigrants (comp. p. 52), and still largely retains its German character. It has a good harbour, shipbuilding yards, and a large fishing-fleet, and exports large quantities of fish. Comp. 'History of the County of Lunenburg', by *M. B. Des Brisay* (2nd ed., 1895). — On the S. side Lunen-

burg Bay is bounded by the *Ovens Peninsula*, so called from the curious caverns which penetrate the cliff for hundreds of feet. A considerable quantity of gold was formerly found on this peninsula, but little mine is now done.

From Mahone the railway makes a loop to the N to —

81 M. **Bridgewater** (*Fairview*, \$2, Rail. Restaurant; U. S. Agent, *Mr. W. H. Owen*), situated on both banks of the *La Have River*, a thriving port of (1901) 3000 inhab., with a lumber-trade and various manufactures. It is the headquarters of the *Halifax & South Western Railway* (p 78). The excellent supplies of water and electric light are furnished by the town-government. Good trout-fishing is to be had in the neighbourhood.

From Bridgewater to *Middleton* and *Victoria Beach*, see R 20b.

Small local steamers ply on the *La Have River* between Bridgewater and *Riverport* and *La Have Island*.

Leaving Bridgewater station, the train crosses the picturesque *La Have River* just above the town and ascends from the valley between hill-tops crowned with homesteads. 89 M. *Conquerall* is the station for a place of that name several miles distant on the *La Have*. 99 M. *County Line* marks the boundary between Lunenburg and Queen's counties. 103 M. *Medway* (Revere, \$11½), 4 M. from the station, is a prosperous fishing-town on a bay which juts in from the Atlantic. Beyond (110 M.) *Brooklyn* the train skirts *Liverpool Bay* and reaches —

112 M. **Liverpool** (*Mersey*, \$2; U. S. Agent, *Mr. J. M. Mack*), a small seaport on the *Mersey*, with (1901) 1937 inhab., a trade in lumber and fish, ship-building yards, and several manufactories. It is pleasantly situated on a spacious harbour, with numerous fine old residences that give the place an air of distinction.

The inland portion of the E. half of the peninsula of Nova Scotia is thickly studded with lakes, the largest of which is *Lake Rossignol* (12 M. by 8 M.), about 20 M. from Liverpool. These lakes, with their connecting streams, afford excellent fishing, and are easily explored, with competent guides, in canoes or flat-bottomed boats. They may also be approached from *Annapolis* (p 75) or from some of the intermediate stations on the *Middleton* section of the *Halifax & South Western Railway* (p 78). An arm of *Lake Rossignol* is bordered by the beautiful *Indian Gardens*, a natural park full of English oaks.

Beyond Liverpool the railway proceeds in the same general S.W. direction. 124 M. *Port Mouton*, on *Port Mouton Bay*, which was visited by De Monts in 1604 and named to commemorate the loss of one of his scanty supply of sheep. — From (151 M.) *Froude's Point* a small steamer plies to *Lockeport*, a fishing-centre with a superb beach. The line now turns to the N., and beyond (157 M.) *Green Harbour* bends to the N.W.

163 M. **Shelburne** (*Atlantic Ho.*, \$2, U. S. Agent, *Mr. Edward M. Bull*), a small fishing and ship-building port, with (1901) 1445 inhab., lies at the head of a safe and beautiful harbour. About 1785 its population rose to 12,000, through the immigration of United Empire Loyalists, and for a brief space it seemed as if Shelburne

were going to outstrip Halifax. Beyond Shelburne the line again trends to the S W. 188 M. *Port Clyde* (McKay's Hotel).

196 M. **Barrington** (*Scotia*, *Christie*, U. S. Agent, *Mr. T. W. Robertson*) lies at the head of *Barrington Bay*, with (1901) 784 inhab. and considerable fisheries. — 199 M. *Barrington Passage*.

From Barrington Passage a steam-ferry plies to *Clark's Harbour* (p. 81) and other points on *Cape Sable Island*.

Beyond Barrington Passage the railway (formerly the Coastal Railway of Nova Scotia) turns to the N W. 207 M. *Wood's Harbour*; 218 M. *East Pubnico*. — 220 M. *Pubnico* (various small inns, \$1), on *Pubnico Harbour* (p. 82), a sporting-resort, was founded about 1650 by the Baron Pobomcoup, whose name it represents in a corrupted form. — 224 M. *Lower Argyle*; 226 M. *Central Argyle*; 230 M. *Argyle* (Frost's Hotel), a good centre for shooting (blue-winged duck, etc.) and fishing. Fine view to the left of **Tusket Bay*, with its innumerable islands. 236 M. *Belleville*, a French Acadian settlement; 239 M. *Tusket* (American House, \$1½; Village Ho., \$1), the station for *Tusket River and Lakes* (excellent fishing for salmon, trout, and alewives; comp. p. 82), 241 M. *Pleasant Lake*, 245 M. *Arcadia*.

248 M. **Yarmouth** (*Grand Hotel*, well spoken of, with a fine view of the town, harbour, and environs, \$2½-3½; *Queen*, \$1½-3; U. S. Consul, *Mr. E. A. Creevey*), a prosperous seaport with (1901) 6430 inhab., ship-building yards, manufactures of woollen cloth, cotton duck, and sail-cloth, and a large trade in fish, lies at the head of a small harbour near the S. extremity of Nova Scotia. It claims to be the most active maritime place of its size in the world, ranking fourth (after Montreal, St. John, and Windsor) among the ship-owning cities of Canada. It is frequented by a considerable number of summer-visitors, and is noted for its beautiful hedges. There is a service of electric cars, extending to *Milton*, *Battery Point*, and other neighbouring resorts. The favourite short excursion is by steam-launch to the prettily laid out *Bay View Park* (restaurant), with its charming views. At the entrance to Yarmouth Harbour, behind *Cape Fourchu* (p. 82), lies *Markland* (Markland Hotel, 180 ft. above the sea, \$1½), reached by steamer from Yarmouth in ½ hr. and affording good bathing and deep-sea fishing.

From Yarmouth to *Boston*, see R. 7b; to *Halifax* and intermediate ports by sea see R. 21b. Steamers also ply from Yarmouth to *St. John* (R. 10) and other ports. — Coaches ply to several places not accessible by railway or steamer. Excursions may be made to the *Tusket District* (p. 82), *Port Maitland*, and other points.

b. By Steamer.

The steamer '*Senlac*', owned by *Wm. Thomson & Co.* of St. John, leaves Halifax every Mon. at 5 p.m. for Yarmouth (fare \$5) calling at various intermediate points and leaving Yarmouth for *St. John* (through-fare \$6; return-fare \$10.50) on Wed. morning. The steamer '*Bridgewater*' of the *Coastal Packet Co.* plies twice weekly to *Bridgewater* (\$2). The above fares do not include meals. The E. coast of Nova Scotia, which these steamers skirt, is indented by numerous bays and fringed with thousands of rocks and islets.

Halifax, see R. 18. The steamer descends the harbour, passing *George's Island* (p. 56) and *Macnaab's Island* (p. 56). At *Herring Cove* (r.) is a cairn commemorating *George Brown*, the oarsman, a native of the place. We then round *Chebucto Head* and *Cape Sambro*, and steer towards the W. Numerous shipwrecks have occurred here. To the right, farther on, opens the wide *St. Margaret's Bay* (p. 78). Straight ahead of us is the large *Mahone Bay* (p. 78), with the towns of *Chester* (p. 78) and *Mahone* (p. 78), at which some of the smaller steamers call

The course of the Bridgewater boat is laid for *Cross Island Light*, to the S. of Mahone Bay, passing which (left) we enter *Lunenburg Bay* (p. 78).

45 M. *Lunenburg*, see p. 78.

The Bridgewater steamer now rounds *Ovens Head*, steers between *Rose Head* (l.) and *Cross Island*, passes *Point Enragé*, and runs between *Calf Point* (r.) and *Ironbound Island* (l.) with its lighthouse. It then ascends the long, narrow estuary of the *La Have River* to —

67 M. *Bridgewater* (see p. 79).

Rounding *Cape La Have*, on an island off the mouth of the river, the steamer steers to the S.W., passing near *Port Medway*. Farther on, *Coffin Island*, with its lighthouse, marks the entrance to *Liverpool Bay*, near the head of which, on the river *Mersey*, lies —

105 M. *Liverpool* (see p. 79).

The next bay of any size beyond *Liverpool Bay* is *Port Mouton* (see p. 79). Farther on are *Little Hope Island* (revolving red light), *Port Joli*, *Lockeport* (see p. 79), *Carter's Island* (red light), and *Gull Rock Ledge* (white light). We then cross the wide estuaries of *Green Harbour* and *Jordan River*, pass *Bony's Point* and *Government Point*, and begin to ascend the sheltered *Shelburne Harbour*, leaving *McNutt's Island*, with its two fixed white lights, to the left.

145 M. *Shelburne*, see p. 79.

In leaving *Shelburne Harbour* the steamer rounds *Cape Roseway*, the S. extremity of *McNutt's Island*. Farther on we pass *Negro Island* (red and white flashing light), off the mouth of the *Clyde*; *Blanche Island*; and *Port Latour*, with some relics of the fort of the *Sieur de la Tour*. Beyond *Baccaro Point* (red light) we turn to the right and ascend *Barrington Bay*. To the left lies the sandy *Cape Sable Island*, supposed by some to be the 'Markland' on which *Leif Ericson* landed in 994. The Acadian settlement which afterwards occupied the island was broken up in 1758, and about 25 years later was replaced by New England Loyalists. There is a summer-hotel (\$ 4½) at *Clark's Harbour*, a village on the island. *Cape Sable* itself, the scene of many shipwrecks, is an islet to the S. of the larger island.

173 M. *Barrington*, see p. 80.

The steamer leaves the open sea, and steers towards the N.W. To the left, at some distance, lies *Seal Island*, the 'Elbow of the

Bay of Fundy', with its fixed white light. To the N. open *Pubnico* and *Abuptic Harbours*.

We now cross the estuary of the *Tusket River* and thread the singular and beautiful archipelago of the **Tusket Islands*. A little later the steamer passes *Jebogue* or *Chebogue Point* and enters *Yarmouth Sound*. To the left is *Cape Fourchu*, with its powerful light.

218 M. *Yarmouth*, see p. 80.

22. From Digby to Yarmouth.

67 M. DOMINION ATLANTIC RAILWAY in 2 $\frac{1}{4}$ -5 hrs. (fare \$2; parlor-car 45c.). Through-train from Halifax to (217 M.) *Yarmouth* in 7-9 hrs. (fare \$6; parlor-car \$1.25). Comp. p. 71

Digby, see p. 76. Beyond *Digby* the train crosses the isthmus between *Annapolis Basin* and **St. Mary's Bay* and then skirts the shore of the latter (views to the right). Across the bay are the hills of *Digby Neck*, a long narrow peninsula forming the S. prolongation of North Mt. (p. 75) and itself prolonged by *Long Island* and *Brier Island*. — 22 M. *Weymouth* (*Weymouth Ho.*, *Goodwin's*, \$1 $\frac{1}{2}$; 685 inhab.), settled by Loyalists and the most important place between *Digby* and *Yarmouth*, is a good starting-point for *St. Mary's Bay* (see above) and the *Tusket* fishing-region (see above). The line bends inland and follows the *Sissibou River* (falls, near *Weymouth*) to *St. Bernard's*, regaining the shore of the bay at (24 M.) *Belliveau*.

The district of *Clare*, through which the railway now runs, is peopled by returned Acadian exiles, who have preserved their French characteristics almost unimpaired. They are settled chiefly along the beautiful *St. Mary's Bay* (see above), of which glimpses may be had to the right. The train passes several small stations and beyond (37 M.) *Meteghan* (1214 inhab.; 5 M. from the railway) turns inland, running first to the S E. and then to the S. Several other insignificant stations are passed in the region of lake and forest between this point and *Yarmouth*.

67 M. *Yarmouth*, see p. 80.

23. From Windsor to Truro.

55 M. MIDLAND EXTENSION OF DOMINION ATLANTIC RAILWAY in 2-4 hrs. (fare \$1.75). This railway is of some importance as forming the central section of a trunk-line from *Yarmouth* to (444 M.) *Sydney* (no through-trains).

Windsor. see p. 71. Leaving *Windsor* the train diverges to the left from the Dominion Atlantic line to *Halifax*, and follows the *St. Croix River* (left), with wharves for shipping to New York the plaster produced in the *Wentworth Quarries* (to the right). We cross the river near (6 M.) *Brooklyn* (*Gibson's*), beyond which the line bends somewhat to the N. Farther on it crosses the *Hebert River*, a small tributary of the *St. Croix*. From (10 M.) *Scottish Village* (Mrs.

Nelson's), 1 M. from the station, a daily stage runs to (15 M.) *Walton*, an attractive place on the Basin of Minas (p. 72).

Beyond (12 M.) *Mosherville* the railway enters the valley of the *Kennetcook River*, which it ascends for nearly 25 M. 19 M. *Clarksville* (Mrs. Clark's), with a productive antimony-mine, is the station for (3 M.) *West Gore* and (8 M.) *Upper Rawdon*. As the train proceeds up the valley it crosses and recrosses the river before reaching (26½ M.) *Kennetcook* (Barrow's, Singer's). Here connection may be made by carriage with (8 M.) *Noel* and (15 M.) *Tennecape Mines*, on *Cobequid Bay*. The Minas and Cobequid shore thus made accessible is a pleasant one for the tourist to visit. Manganese-mines and gypsum-quarries are found there, and borings have also been made for oil.

At (30 M.) *Patterson* (Mrs. O'Brien's), a farming community, the train leaves the *Kennetcook River* (here insignificant). Beyond (35 M.) *Burton's* we cross the *Five Mile River*, which flows into the *Shubenacadie*. — From (40 M.) *South Maitland* (Midland House) a stage runs to (5 M.) *Maitland* (Commercial; Mrs. Dart's), formerly a large ship-building port, whence a steamer runs fortnightly to *Parrsboro* (p. 74). The (8 M.) *Noel Shore* (comp. above) may be reached by the same stage. — Between *South Maitland* and (42 M.) *Green Oaks* the train crosses the *Shubenacadie River* by a costly steel bridge, having five spans and a draw, which proved very difficult to build owing to the height and strength of the tide. Beyond (46 M.) *Princeport Road* (2 M. from *Princeport*) the train approaches *Cobequid Bay*, and after leaving (51 M.) *Clifton* it affords excellent views of the bay, and the *Cobequid Mts.* on the opposite shore. At (53 M.) *McNutt's Creek* we reach the *Salmon River* (left), the bank of which we follow to —

58 M. *Truro* (see p. 84).

24. From Halifax to Quebec (Lévis) by Railway.

674 M. INTERCOLONIAL RAILWAY in 19½-21½ hrs. (fare \$ 14.85; sleeper \$ 4). [From Halifax to (337 M.) *Montreal* in 24-27 hrs. (\$ 18.45; sleeper \$ 4)] This railway, owned and managed by the Dominion Government, gives access to the summer-resorts of *Cape Breton*, *Nova Scotia*, and *New Brunswick*, and to many of the famous fishing-rivers of *New Brunswick*, traverses the picturesque valley of the *Matapedia*, and skirts the S. shore of the *St. Lawrence*. It connects at different points with steamers to the *Gaspé Peninsula* and to *Prince Edward Island*. The railway uses the 24-hour system of time notation (p. 236), and its trains run on E. Standard Time between *Montreal* and *Campbellton* (N. B.) and on Atlantic Standard Time (1 hr. earlier) in the Maritime Provinces (p. xii).

Halifax, see p. 50. Beyond (4 M.) *Rockingham* (hotel), with a large convent-school for girls, the train skirts the shore of the beautiful *Bedford Basin* (views to the right). — 9 M. *Bedford* (*Bedford*, *Bellevue*, \$ 1½-2), at the head of *Bedford Basin* (p. 58), is a

favourite summer-resort of the Haligonians. — We cross *Rocky Lake*. To the right diverges the short branch-line to (13 M.) *Dartmouth* (p. 58). At (14 M.) *Windsor Junction* the Dominion Atlantic Railway diverges to the left (see R. 20a). We next pass *Long Lake*, on our right. A little farther on, at (23 M.) *Grand Lake Station*, the lake, well stocked with whitefish, lies to the left. Near (28 M.) *Enfield* are the *Oldham* and the *Renfrew Gold Mines*, both profitably worked. — For some distance before reaching (40 M.) *Shubenacadie* (accent on ante-pennultimate) we have on our right the river of that name and we cross it just beyond the town. Stages run hence to (18 M.) *Maitland* (p. 83). — The line proceeds to the N.E. and N. through a district of no great interest. 45 M. *Stewiacke*, on the *Stewiacke River*, 54 M. *Brookfield*.

62 M. *Truro* (55 ft.; **Stanley Ho.*, *Learmont*, *Granville*, \$2; *Victoria*, \$1½; *Rail. Restaurant*), a town of (1901) 5993 inhab., with manufactures of hats, hardware, iron and steel castings, machinery, saddlery, boots and shoes, woollen goods, and condensed milk, is also the centre of a large agricultural district and a railway-junction of some importance (comp. RR. 19a, 23). It is situated on the *Salmon River*, about 2 M. from the head of *Cobequid Bay*, the easternmost arm of the Bay of Fundy, and was founded in 1761 as a colony of Scots-Irish settlers from New Hampshire. The streets are well laid out and shaded with fine trees; and altogether the little town makes a very pleasant and friendly impression. Among the chief buildings are the *Post Office*; the *Normal School* (about 200 students), with a statue of *Dr. Forester*, its former principal and a prominent educator, in front of it; and the *Truro Academy*. A good view of the town and neighbourhood is obtained from the roof of the *Exhibition Building*. The **Victoria* or *Joseph Howe Park* (reached by crossing the overhead bridge at the railway-station), in a beautiful little wooded glen, is one of the most attractive municipal pleasure-grounds in America. About 1 M. up the stream are the picturesque little **Joe Howe Falls*.

The *Salmon River*, where it enters the bay, 2 M. from the city, is spanned by the *Board-landing Bridge*, a good point to view the tidal phenomena of the Bay of Fundy (p. 76). About 10 M. down the bay lie *Savage's Island* (with an old Acadian and Indian burial-ground) and *Old Barns*, the site of an Acadian settlement. — *Penny's Mt.*, 3½ M. to the N.E., commands a delightful **View*, including the *Cobequid Mts.* (p. 45) and *North Mt.* (p. 75), with *Cape Blomidon*. — The streams near *Truro* afford some fair fishing. Moose occur in the *Stewiacke Mts.*, about 12-15 M. to the E. (Indian guides obtainable at *Truro*). Partridge, snipe, and wild-fowl are plentiful.

From *Truro* to *Stellarton (Pictou)* and *Cape Breton*, see R. 19a; to *Windsor*, see R. 23.

Beyond *Truro* we obtain views of *Cobequid Bay* before reaching (73 M.) *Debert*. — From (79 M.) *Londonderry* (320 ft.) a branch-line runs to (3 M.) the important *Acadia Iron Works*. The *Londonderry* mines produce both *Limonite* and *Spathic* ores, which are smelted together and produce a good quality of pig-iron. — We

cross *Folleigh Valley* by a viaduct, 600 ft. long and 82 ft. high, and ascend the *Cobequid Hills* (400-1000 ft.), which run E. and W. through this part of the peninsula for about 100 M. Passing *Folleigh Lake* (610 ft.), the highest point of this part of the line, we descend to (91 M.) *Wentworth*. We enjoy a charming view of the * *Wentworth Valley*, below us, to the right, before reaching (96 M.) *Westchester*. Leaving the *Cobequid Hills* behind us, we now traverse a thickly-wooded district to (108 M.) *Oxford Junction*, the starting-point of the *Oxford & Pictou Branch* of the railway (see below).

The chief stations on this branch are (3 M.) *Oxford* (Oxford Ho.), with woollen mills; 16 M. *Pugwash Junction*, for a side-line to (6 M.) *Pugwash* (Central, \$ 1½, Acadia, Minto, \$ 1¼, Ger. Consular Agent), a seaport and watering-place on *Northumberland Strait* (p. 98), almost destroyed by fire in 1898, 23 M. *Wallace* (Wallace Ho.; Hillside, \$ 1¼); 35 M. *Tatamagouche* (Stirling Ho., \$ 1¼), on a beautiful bay, well seen from the railway, with oyster-beds, boating, and fishing, 47 M. *River John* (Riverside), yet another popular little summer-resort; and (67 M.) *Brown's Point*, the junction of the short branch-line from Pictou to Stellarton — 69 M. *Pictou* is described at p. 60.

The next stations on the I.C.R. are (111 M.) *River Philip*, (115 M.) *Salt Springs*, and (121 M.) *Springhill*, the last the junction of the *Cumberland Railway* to (32 M.) *Parrsboro* (see below).

Parrsboro (*Grand Central*, \$ 1¼, *Queen's*, \$ 1-1¼, *Evangeline*, \$ 1½, these three indifferent; *Brodrick's*, \$ 1½, at *Parrsboro Pier*, about 1 M. from the town, well spoken of, *U. S. Com Agent*), a small lumber and coal-trading port on the *Basin of Minas*, with (1901) 2705 inhab., is frequented as a summer-resort, for its fishing, shooting, and other attractions. Some of the best caribou and moose shooting in Nova Scotia is within reach of *Parrsboro*, and bears are also occasionally seen. The harbour is sheltered by *Partridge Island* (fine views). Pleasant walks or drives (good roads) may be taken to the *Moose River Falls*, *Cascade Valley*, the *Five Islands*, *Advocate Harbour* (coach), *Cape d'Or*, and other points. The geologist will find much to interest him in the coast. Steamers ply from *Parrsboro* to *Kingsport* (p. 74) *Cape Blomdon* (p. 74) is about 8 M. distant.

The *Springhill Coal Mines*, about 5 M. from *Springhill Junction*, on the railway to *Parrsboro*, have an annual output of about 500,000 tons. In 1894 a monument was erected at the adjoining town of *Springhill* (Royal Hotel) to commemorate 125 miners killed by an explosion in 1891.

The next stations on the main line are (127 M.) *Athol* and (130 M.) *Maccan*. From the latter, which is situated amid coal-fields, a short branch-railway runs to (12 M.) *Joggins*, another coal-mining place.

The *Joggins Shore*, extending along *Chignecto Bay*, has fine cliffs, 100-400 ft. high, and exhibits wonderful petrified forests and sections of carboniferous strata, which have been visited and described by Sir Chas. Lyell, Sir William Dawson, and Sir W. E. Logan.

The railway now proceeds to (134 M.) *Nappan*, the seat of a Government experimental farm, and runs towards the N.

138 M. *Amherst* (55 ft.; *Terrace Ho.*, \$ 2; *Amherst Ho.*, \$ 1½-2), one of the most progressive and important towns of Nova Scotia with (1901) 4964 inhab., lies not far from the head of *Cumberland Basin*, an arm of the *Bay of Fundy*. It contains many substantial buildings and carries on a brisk trade in lumber and in the produce of the fertile marshes all round it. It is likewise a flourishing manu-

facturing town, possessing car-works, engine and machine works, a boot and shoe factory, and other industries. Pleasant drives may be taken to (17 M.) *Tidnish*, a summer-resort on Northumberland Strait where boating and deep-sea fishing may be enjoyed, to *Baie Verte*, to *Fort Beauséjour* (see below), etc

Near (141 M.) *Fort Lawrence Station* was the W. terminus of the proposed *Chignecto Ship Railway* (see below)

The object of this railway was to save ships the long *détour* necessary in going from the Bay of Fundy to the Gulf of St. Lawrence. It was intended to lift ships of 1000 tons' burden on to a huge ship-carriage by powerful hydraulic presses and then haul them across the isthmus by locomotives. After absorbing large sums of money, the scheme has been abandoned. The works are most conveniently visited by carriage from Amherst (p. 85).

We now cross the *Missiguash* (see below) and enter *New Brunswick* (p. 36) We see the remains of *Fort Beauséjour* (see below), on the right, before crossing the *Aulac* and reaching (144 M.) the town of *Aulac*. No vestiges of *Fort Lawrence* (see below) remain. The *Chignecto Peninsula*, which we are now crossing, connects Nova Scotia (Acadia) with New Brunswick and was the scene of some of the last struggles between the French and British nationalities in Canada (1755).

The French insisted that '*Acadia*', which they had ceded to Great Britain, comprised only the peninsular portion of the Maritime Provinces and that the *Missiguash* (see above) was the boundary between the French and British possessions. The strong *Fort Beauséjour* was built to the N. of that river, to defend the frontier. The warrior-priest *Le Loutre* made this his headquarters and was indefatigable in his exertions to persuade or force the *Acadians* of the isthmus to renounce their British allegiance. The British built *Fort Lawrence*, on the other side of the *Missiguash*. In 1755 Col. Monckton succeeded in capturing *Fort Beauséjour*, the name of which was changed to *Fort Cumberland*; and it was afterwards allowed to fall into decay.

Beyond *Aulac* the I.C.R. traverses the famous *Tantramar* or *Tintamarre Marshes*, containing about 40 sq. M. of exuberantly fertile salt-meadows, reclaimed, like the polders of Holland, from the sea by dykes. Through the midst of the marshes, which bear splendid crops of hay, runs the *Tantramar River*, the appearance of which varies greatly at low and high tide. — 148 M. *Sackville* (Brunswick, \$1½-2), a small ship-building town with about 1500 inhab., is the junction of a railway to *Cape Tormentine* (see below). It is the seat of *Mt. Allison College*, a Methodist institution with 125 students, and exports cattle and hay to England.

The NEW BRUNSWICK & PRINCE EDWARD ISLAND RAILWAY, running from *Sackville* to (36 M.) *Cape Tormentine*, is of importance as the winter mail route to Prince Edward Island. The steamers to Summerside and Charlottetown (see p. 97) have to cease running in winter on account of the ice, and their place is taken by the '*Minto*' and '*Stanley*', two strong iron boats specially built for forcing their way through the floating ice, which ply from *Pictou* to Charlottetown and Georgetown (comp. p. 97). Occasionally during the winter even these steamers are unable to make their regular trips, and recourse is then had to strongly-built row-boats with two keels (like the runners of a sleigh), which are propelled through the

water or over the ice as occasion demands; and these follow the shortest route between the mainland and the island (from Cape Tormentine to *Cape Traverse*, 10 M.).

The railway now runs athwart the peninsula between *Cumberland Basin* and *Shepody Bay* — 160 M. *Dorchester* (Windsor Ho., \$1½-3), a small port at the junction of the Memramcook with the *Petitcodiac*, with about 1250 inhab., exports grey sandstone from the neighbouring quarries. The prominent stone building on the hills above the town is the *Penitentiary of the Maritime Provinces*. — The railway now turns to the N. and runs through the valley of the *Memramcook*, passing (165 M.) *College Bridge*, the station for St. Joseph's College (R. C.), and (167 M.) *Memramcook*, a flourishing village, the centre of a farming district peopled by Acadian French. At (179 M.) *Painsec Junction* diverges a branch-line to (11 M.) *Point du Chêne*, one of the chief starting-points for *Prince Edward Island* (comp. p. 97).

On this branch lies (9 M.) *Shediac* (*Weldon*, \$1½), a small bathing-resort on *Shediac Bay*, famous for its oysters and its fine sandy beach. Anglers may catch brook-trout, sea-trout, bass, and mackerel. — 11 M. *Point du Chêne* (*Point du Chêne Ho.*, \$1½) is a small village on a sandy point, with long piers running out into deep water. Steamer hence to *Summerside*, P. E. I., see p. 97.

186 M. *Moncton* (40 ft.; *Brunswick*, \$2-2½; *Minto*, from \$2; *American*, from \$2, *Rail. Restaurant*; U. S. Consul, *Mr. G. Beutelspacher*), the second city in New Brunswick, with (1901) 9026 inhab., has manufactures of iron castings, machinery, locomotives, leather, cotton, wooden wares, woollen goods, and flour, lies at the head of navigation of the *Petitcodiac River*, and is a railway-centre of considerable importance. It is the headquarters of the *Intercolonial Railway*, whose plain but substantial *General Offices* are, perhaps, the most noteworthy building of the enterprising little city. There are also some solid stone business-blocks and good churches. The *Petitcodiac* flows into the Bay of Fundy (p. 76), and the tide ascending its estuary comes in the form of a 'bore' or tidal wave 4-6 ft. high. The difference between extreme high, and extreme low, tide at Moncton is 30 ft. A small steamer occasionally sails down the river to the Bay of Fundy, stopping at Hillsboro (p. 48). — Pleasant drives may be taken to (17 M.) *Shediac* (see above), and to (24 M.) *Hopewell Cape*, with its remarkable rocks of red sandstone, sculptured into fantastic shapes by the powerful tides.

FROM MONCTON TO BUCTOUCHE, 32 M., *Moncton & Buctouche Railway* in 2 hrs. (fare 96 c., second class 65 c) — This railway runs towards the N. The intermediate stations are unimportant. *Buctouche*, an Acadian ship-building village of 500 inhab., at the mouth of the *Buctouche River*, attracts a few summer-visitors.

At Moncton the *Intercolonial Railway* forks, the main line going on to Quebec and Montreal, while the line to St. John (see R. 17) diverges to the left.

From Moncton the line at first runs for a short distance towards the N.W. and beyond (194 M.) *Berry's Mills* turns to the N. — At

(205 M.) *Canaan* we cross the river of that name. 214 M. *Coal Branch*; 217 M. *Adamsville*, 223 M. *Harcourt*, the station for *Weldford*. — From (232 M.) *Kent Junction* (Walsh Ho., \$1) the Kent Northern Railway runs to (27 M.) *Richibucto* (fare \$1) and (34 M.) *St. Louis* (fare \$1.25; see below).

Richibucto (*Kent*, \$1½; *U. S. Com. Agent*) is a town of (1901) 3879 inhab., at the mouth of the river of the same name, with ship-yards and a trade in timber. It is also frequented to some extent for sea-bathing. — *St. Louis* is a typical Acadian settlement, with a fine church, a convent, and a sacred well to which pilgrimages are made for the healing of ailments.

The district now traversed is scantily settled and of little interest. — At (258 M.) *Chatham Junction* we intersect the line from Chatham to Fredericton (p. 89). From (260 M.) *Derby Junction* a branch-line runs along the bank of the S. W. *Miramichi* to (14 M.) *Indiantown*. To the right lies *Beaubair Island* (see below). The train now crosses the arms of the *Miramichi* (see below), just below their confluence, by two bridges, each 1200 ft. long.

264 M. *Newcastle* or *Miramichi* (130 ft.; *Miramichi*, \$2-2½, *Waverley*, \$1½-2, *U. S. Com. Agent*), a ship-building and timber-trading town of (1901) 4130 inhab., is situated on the left bank of the *Miramichi*, at the head of deep-water navigation. It is also the centre of a fishing and hunting district — On the opposite (S.) shore, 6 M. lower down and reached either by steamer or railway (see p. 89), lies *Chatham* (*Adams Ho.*, \$1½-2; *Bowser's*, \$1½; *Fr. Cons. Agent*; *Ger. Consul*), the chief place on the Gulf coast of New Brunswick, with an excellent harbour, ship-yards, pulp-mills, foundries, and a large lumber-trade. Like Newcastle, it is a famous resort for sportsmen. Pop. (1901) 6624. The most conspicuous buildings are the *Roman Catholic Cathedral*, the *College of St. Michael*, the *Convent*, and the *Hospital* (all of wood).

The *Miramichi* (a corruption of an Indian name of unknown meaning; accent on the last syllable), on the estuary of which these towns lie, is second to the *Restigouche* alone among the salmon-rivers of New Brunswick. It is formed by the junction, a little way above Newcastle (see above), of the *North-West Miramichi* and the *South-West Miramichi*, and each of these has an extensive network of tributaries, some of which overlap the tributaries of the *St. John*. The best salmon-pools are on the S. W. *Miramichi* (which is really the main river) and its branches, but good fishing is obtained throughout the entire system. The district drained by the *Miramichi* is, perhaps, 6000 sq. M. in extent, and much of it is still almost unexplored. It is covered by forests, which harbour large quantities of game and yield much valuable spoil to the lumberman. In 1825 it was swept over by one of the largest forest-fires on record, which devastated 3,000,000 acres of wood, destroyed property to the value of \$1,000,000, and caused the death of 150-200 persons.

Miramichi Bay was visited by Jacques Cartier and is frequently mentioned in the history of the French and English struggle for Canada. *Beaubair Island* (see above) was occupied by a French town, destroyed by the English in 1759. — *Burnt Church*, on the N. shore of the Bay, commemorates in its name another act of destruction and is to-day one of the chief gathering-places of the Micmac Indians (p. 91). — A little to the N. of *Burnt Church* lies *Tabusintac*, at the mouth of a river that affords good sea-trout fishing.

FROM CHATHAM TO FREDERICTON, 120 M., *Fredericton Section of the Intercolonial Railway* in 5 hrs. (fare \$3.60). — This line intersects the main line of the I.C.R. at (12 M.) *Chatham Junction* (p. 88) and ascends the valley of the *S. W. Miramichi* (p. 88), crossing from the right to the left bank of the river at (32 M.) *Blackville*. At (56 M.) *Doaktown* it recrosses the river. 68 M. *Ludlow*. Beyond (72 M.) *Boiestown* the railway turns to the left (S) and leaves the *Miramichi*. At (94 M.) *Cross Creek* it crosses the watershed to the valley of the *Nashwaak*, along which stream it descends to (117 M.) *Marysville*, (119 M.) *Gibson*, and (120 M.) *Fredericton* (p. 86), crossing the *St John* by a fine steel bridge (p. 36), 2100 ft. long. — The actual E. terminus of this line is at *Loggieville*, 5 M. from Chatham.

Between Newcastle and Gloucester Junction the railway traverses a thinly-peopled region, which offers many attractions to the sportsman in the shape of moose, caribou, bear, partridge, and trout. 274 M. *Bever Brook*; 285 M. *Bartibogue* (510 ft.); 295 M. *Red Pine*.

303 M. *Gloucester Junction* is the starting-point of a line running to the E. to *Shippegan* (see below).

FROM GLOUCESTER JUNCTION TO SHIPPEGAN, 70 M., *Caraquet & Gulf Shore Railway*, in 4 hrs. (fare \$2.10) — The line passes (5 M.) *Bathurst* (see below) and follows the coast of Bay Chaleur (p. 90). The intermediate stations include (25 M.) *New Brandon*, (31 M.) *Grand Anse*, and (50 M.) *Caraquet (Hotel, \$2)*, a quaint Acadian settlement and important fishing-station. — From (62 M.) *Pokemouche Junction* a branch-line runs to the S. to (14 M.) *Tracadie*, with a lazaretto for lepers maintained by the Canadian Government, and (18 M.) *Tracadie Mills*. — 70 M. *Shippegan (Hotel)* has a fine harbour and important fisheries of herring, cod, and mackerel. It is one of the numerous places that have been mentioned as the American terminus of a new and short Atlantic service.

Off the coast here lies *Shippegan Island* (comp. p. 90), which affords good wild-duck shooting in autumn. Still finer shooting (geese, ducks, plovers, etc.) is afforded by the island of *Miscou* (p. 90), to the N. of it, which is reached by boat from *Caraquet*.

From Gloucester Junction the railway continues through the big game and salmon-fishing region of the North Shore to —

308 M. *Bathurst* (40 ft., *Sweeney Ho.*, \$1½-2; *Robertson's*, \$1½; *White House*, \$1½, *U.S. Agent*), a busy fishing-town and lumber-exporting centre with about 2500 inhab., on a small peninsula projecting into *Bathurst Harbour*, which opens out of *Nipisiguit Bay*, itself a recess of the Bay Chaleur. It is also a growing summer-resort, with numerous cottages. The railway-station is about ½ M. from the town. Four rivers flow into *Bathurst Harbour*, one of which, the *Nipisiguit*, affords the finest salmon-fishing in New Brunswick and is famous among salmon-streams the world over (the fishing-privileges are leased, but are sub-let by the day, week, or month at reasonable rates). About 7 M. above *Bathurst* are the *Pabineau Falls* or *Rapids*, while 13 M. higher up the river forms the *Grand Falls*, consisting of four leaps with a total height of 140 ft. Another favourite point is the *Tête-à-Gauche*, or *Fairy River*, with its small but picturesque falls (7 M.)

Beyond *Bathurst* we cross the *Tête-à-Gauche*, and, farther on, the *Nigadou*. 320 M. *Petite Roche*. 337 M. *Jacquet River* (Bay View, \$1) and (352 M.) *Charlo* (Bay Shore, \$1¼) are angling-resorts. The railway now skirts the S. shore of the Baie des Chaleurs (views

to the right). 353 M. *Eel River* Mt. Tracadiegash (p. 92) rises on the farther shore of the bay.

362 M. *Dalhousie Junction* is the diverging point of a short line to (7 M.) *Dalhousie* (*Murphy Ho.*, \$1½-2), a port of entry situated at the point where the estuary of the Restigouche merges in the Baie des Chaleurs, and one of the most popular and attractive marine resorts in the Maritime Provinces. It also carries on a considerable trade in lumber, preserved salmon, and lobsters. Pop. (1901) 2183. The large and sheltered harbour offers safe facilities for boating, while smooth beaches and water of mild temperature invite the bather. Pleasant walks and drives may be taken amid the adjacent hills, and the fisherman will find no lack of opportunity to test his skill. *Mt. Dalhousie* (715 ft.), 2 M. from the town, is a good point of view.

The *Restigouche River*, at the mouth of which *Dalhousie* lies, claims to be the best salmon-fishing river in the world, and advances some strong evidence in favour of this assertion. The largest salmon known to have been caught in it weighed 54 lbs., and the average weight is about 22 lbs. All the best reaches of the *Restigouche* itself and its numerous tributaries are leased to individuals and clubs (many American), and the total annual rental for fishing-purposes amounts to about \$12,000 (24000.). When the expenses of living, guides, canoes, keepers, and so on are added to this, it has been estimated that each salmon caught costs \$25-35 (5-71.). Among the chief tributary streams are the *Matapedia* (see p. 91), the *Upsalquitch* (abounding in trout and salmon), the *Patapedia*, and the *Quataamkedgewick* (usually known as the 'Tom Kedgewick'). The headwaters of the *Restigouche*, which is 130 M. in length, are within 15 M. of the *St. John River* (between Edmundston and Grand Falls), and the latter can, indeed, be reached by canoe with a portage of only 3 M. (comp. p. 41). The estuary of the river, extending from *Dalhousie* to *Matapedia* (p. 91), is very picturesque and measures 4 M. across its widest part. About 2½ M. above Campbellton, on the Quebec side of the river, is *Pont Bourdo*, about 3 M. above which lay the French town of *Petit Rochelle*, destroyed by the British fleet under Commodore Byron in 1760.

The *Baie des Chaleurs*, or *Bay Chaleur*, was so named by Jacques Cartier, who discovered it in the hottest part of the year 1535. Its Indian name is *Eketuam Nemaachi* ('sea of fish'), a name which it amply justifies by the wealth of its fisheries (cod, herring, mackerel, tunny, etc.). The bay, which is 85 M. long and 15-25 M. wide, is said to be entirely free from shoal or reef dangerous to navigation. The entrance is partly protected by the two large, low, wooded islands of *Shi'pegan* and *Miscou* (see p. 89). The bay was the scene of the crime which forms the subject of Whittier's poem 'Skipper Ireson's Ride'.

On the N. the *Baie des Chaleurs* is bounded by the *Peninsula of Gaspé*, an elevated plateau (ca. 1500 ft.) forming the N.E. terminus of the Appalachian system of mountains. Above the general level stand out the *Shickshock Mts.*, running through the centre of the peninsula and attaining a height of 3500-3800 ft. The peninsula is thinly populated (ca. 20,000), the settlements being confined to the coast. Its industries are lumbering and fishing. Travellers who wish to see something of the peninsula may proceed by steamer (Quebec S.S. Co.) from Quebec to Gaspé (see p. 91), but those who object to this long voyage can visit the most interesting points from Campbellton (p. 91) via the steamer 'Lady Eileen', sailing twice weekly through the *Baie des Chaleurs* to *Gaspé* (176 M., in 18½ hrs; return-fare \$10, berth and meals included).

The points called at include *Carleton* (p. 92); *Maria* (p. 92); *New Richmond* (44 M.; p. 92); *Caplin*; *Bonaven'ure*; *New Carlisle* (78 M.; p. 92); *Paspébiac* (p. 92); *Port Daniel* (102 M.), with a fine harbour, *Newport*; *Pabos*; *Grand River*; and *Barachois* (162 M.). The steamer then rounds *Cape Despair*

or *Cap d'Espoir*, calls at *Cape Cove*, and a few miles farther on passes between the lofty cliffs (400-500 ft.) of *Bonaventure Island*, on the right, and the *Percé Rock* (*Le Rocher Percé*), on the left. The latter, a huge mass of red sandstone, 290 ft. high and 1500 ft. long, is one of the lions of the Gaspé coast and derives its name from the arch or tunnel (ca 50 ft high) by which it is pierced. A second arch fell in some years ago. The top of the rock is occupied by swarms of sea-gulls and cormorants. The rock figures in a story by Sir Gilbert Parker, entitled 'The Gunner of Percé Rock'. The steamer calls at the cod-fishing village of *Percé*, behind which rises the conspicuous *Mt St. Anne* (1230 ft.) It then crosses *Mal Bay* to *Point St Peter*. This forms the S extremity of *Gaspé Bay*, which we now ascend, with the dangerous beach of *Grand Grève* to the right, and *Douglastown*, at the mouth of the *St. John*, on the left. *Cape Gaspé*, 690 ft. high, is the N. horn of the bay and the E. extremity of the peninsula. To the left, above *Douglastown*, opens the secure harbour of *Gaspé Basin* on which lies the destination of the steamer, *Gaspé* or *Gaspé Basin* (176 M.; *Baker Ho.*, \$ 1½-2; U. S. Consul, *Mr. A. F. Dickson*, Fr. Cons Agent), a small port with about 1800 inhab., including *York* and *Gaspé Sands*, and important fisheries of salmon, mackerel, and cod. It is frequented in summer for the excellent angling in the *York* and *Dartmouth* rivers and the good boating in the Basin. Cartier landed here in 1534, taking possession of the country in the name of the King of France. In 1627 a French fleet under Adm. de Roquemont was destroyed in Gaspé Basin by the Kikies (p. 147). In 1760 Gaspé was captured by Commodore Byron. — From Gaspé travellers may either return to Campbellton (see below) or go by steamer to *Quebec* (comp. p. 145) For the latter route, see pp. 166, 4. The island of *Anticosti* (p. 3) is about 40 M. from Cape Gaspé.

From Dalhousie Junction the railway runs to the W. to (371 M.) *Campbellton* (*Royal, Waverley*, \$ 1½-2; U. S. Consul, *Mr. J. S. Benedict*), a town at the head of deep-water navigation, with about 4000 inhab., carrying on a trade in fish and lumber. It is visited to some extent as a summer-resort, for which its beautiful situation admirably fits it, but still lacks a first-class hotel. It is also a favourite starting-point for fishing, hunting, and canoeing trips. The time changes here from the Atlantic to the Eastern standard (see p. xii). The *Sugar Loaf* (950 ft.), rising behind the town, commands a charming view.

At *Cross Point* or *Mission Point*, opposite Campbellton, on the N bank of the Restigouche, is one of the chief villages of the *Micmac* or *Souriquois Indians*, with about 500 inhab., few of whom are of pure blood. The Micmacs, a nomad tribe of Algonquin stock, are scattered throughout the Maritime Provinces, and in the peninsula of Gaspé, to the number of about 7000. They are excellent sportsmen and fishermen and afford admirable service as guides and canoe-men. See 'Legends of the Micmacs', by the *Rev. Silas T. Rand*.

Just beyond Campbellton the train threads the only tunnel on the line (though there are a great many snow-sheds), and runs up the narrowing estuary (*Views to the right). We enter the province of *Quebec* (p. 148) just before crossing the Restigouche by a bridge 300 yds long.

384 M. *Matapedia* or *Metapedia* (35 ft.; Ferguson's, \$ 1½), beautifully situated at the 'meeting of the waters' of the Matapedia and the Restigouche (p. 90), with the headquarters of the Restigouche Salmon Club, is the junction of a railway to New Carlisle (see below).

FROM MATAPEDIA TO NEW CARLISLE AND PASPÉBIAC, 98 M., *Atlantic & Lake Superior Railway* in 5½ hrs. This line skirts the N shore of the

Base des Chaleurs (p. 90) and, as its ambitious name implies, is supposed to form a connecting link in the direct communication between the Atlantic and Lake Superior. It is to be extended to Gaspé Basin — Most of the stations are unimportant 22 M. *Pont La Garde*. — 36 M. *Nouvelle*, in the valley of the trout-river of that name, 44 M. *Carleton* (Cullen, Lundry, \$1½), a summer and bathing resort, with good boating, fishing, and shooting, near the base of *Mt. Tracadiegash*. 53 M. *Maria* and the following stations are on *Cascapedia Bay*, which receives the waters of the *Great Cascapedia River*, a famous salmon-stream 68 M. *New Richmond* (Cascapedia Ho., \$1), with good bathing, boating, and fishing, has been a favourite summer-residence of several Governors-General. 79 M. *Caplin*. — 98 M. *New Carlisle* (Caldwell, Menard, \$1½). Adjacent is *Faspebiac* (*Clement, Doucet*, \$1½; *U. S. Com. Agent*), a village of (1901) 1759 inhab., with a good harbour. It is one of the main seats of the great fishing-house of Robin & Co., whose headquarters are in Jersey.

We now leave the English-speaking country and enter a French-Canadian district. The characteristics of the inhabitants of this region are well described in the following quotation from a pamphlet by *W. Kilby Reynolds*.

'A quiet people are these *habitants* of the Lower St. Lawrence, simple in their tastes, primitive in their ways, and having an abiding devotion to their mother tongue and mother church. The opening-up of the country has changed them a little, in the larger villages, but as a whole they are much as they have been for the last two hundred years. Their ways are nearly as the ways of their fathers. The railway and telegraph of the nineteenth century run through a country in which hundreds of people are to all intents and purposes in the seventeenth century. Not to their disrespect be this said, but as showing the tenacity with which they adhere to their language, manners, and customs. They are as conservative as any people on earth. Where innovations are thrust upon them by the march of progress they adapt themselves to the changes; but where they are left to themselves they are happy in the enjoyment of the life their fathers led, and are vexed by no restless ambition to be other than they have been. Their wants are few and easily supplied; they live peaceful and moral lives; and they are filled with an abiding love for their language and a profound veneration for their religion. By nature light-hearted and vivacious, they are optimists without knowing it. Inured to the climate, they find enjoyment in its most rigorous seasons. French in all their thoughts, words, and deeds, they are yet loyal to the British crown and contented under British rule. The ancient laws are secured to them by solemn compact; and their language and religion are landmarks which will never be moved. In places where the English have established themselves, some of the *habitants* understand the language of the intruders, but none of them adopt it as their own. The mingling of races has a contrary effect, and the English tongue must yield to the French. There are many Englishmen in this country whose children do not understand a word of their father's native tongue, but there are no Frenchmen whose children are ignorant of the language of France.

Where the advent of the tourist has not robbed the native of his simplicity of character, he is likely to make a favourable impression on the stranger. He is the type of a peculiar people, many of whom are in very humble circumstances. Among the elders books are often sealed mysteries; it is enough for them to know what their church teaches, and for them to obey it. Their condition of life is not such as conduces to refinement, but they have much of that true politeness which is dictated by sincerity, and they seek to fulfil the stranger's wishes as a matter of plain duty.

394 M. *Mill Stream*; 405 M. *Assametquaghan*; 412 M. *Pleasant Beach*. — 419 M. *Causapsical* (Fortin, \$1½), at the mouth of that river, is the chief angling-resort in the valley. Good trout-fishing is

obtained in various small lakes. The shooting-lodge in which Lord Mount Stephen used to entertain the Princess Louise has been sold to the Restigouche Salmon Club. — 426 M. *Salmon Lake*; 432 M. *Amqui* at the junction of the river of that name with the *Matapédia*. — From this point we ascend the beautiful **Valley of the Matapédia* or *Metapédiac*, hugging the river closely for about 60 M. and crossing it 3 or 4 times. The valley is enclosed by wood-clad hills 500-1000 ft. high, which approach each other so closely at places as barely to leave room for the river, the railway, and the well-built highroad. The river forms innumerable rapids and is one of the most famous salmon-streams in Canada. As usual, the salmon-fishing is all in private hands and strictly preserved; but good trout-fishing and fair though simple accommodation may be obtained at almost any of the stations along the line. 440 M. *Cedar Hall*, at the mouth of the *Matane River*. 447 M. *Sayabec*, near the N. end of *Lake Matapédia* (16 M. long), which we see to the right. We now ascend to the highest point of the line, near *Lake Malfait* (750 ft.), and descend rapidly on the other side to (467 M.) *Little Métis Station* (560 ft.).

Little Métis (*Seaside, Cascade, Turraff Hall*, \$ 1½-2) lies on the St. Lawrence, 6 M. to the N. of the station, and has become a favourite summer-resort, affected, according to 'Picturesque Canada', by 'the scientist, the blue-stocking, and the newly-married'. It has a good sandy beach, on which the salt waves of the St. Lawrence, here nearly 40 M. wide, roll in with something of an oceanic effect. Among the cottages is the tasteful fishing-lodge of *Lord Mount Stephen*. The *Grand* and *Little Métis Rivers* contain salmon and trout (the latter free to all-comers), and good trout-fishing is to be had in the *Métis Lakes*. Partridge, wild-fowl, and caribou are found in the woods and on the shore. Pleasant drives may be taken to (7 M.) the falls of the two rivers above named and to other points.

471 M. *St. Octave* is the station for *Grand Métis*, with its mixture of Scottish Presbyterians and French Catholics. The line now approaches the St. Lawrence. We cross the *Métis River* and bend to the left (S.). — 476 M. *Ste. Flavie* (250 ft.; Mt Joli, \$ 1¼). — 490 M. *St. Anaclet* is the station for *Father Point* (p. 4), where outward-bound vessels discharge their pilots.

494 M. *Rimouski* or *St. Germain de Rimouski* (80 ft.; *Lenghan Hotel*, \$ 1-1½; *St. Germain*, \$ 1½; *Rimouski*, \$ 1¼; U. S. Consul, *Mr. E. N. Gunsaulus*), a small town with (1901) 1804 inhab. and a trade in lumber, is best known as the port of call of the ocean-steamers, where passengers and mails from (or for) the Maritime Provinces embark or disembark (comp. p. 4). It is the seat of a Roman Catholic bishop and possesses a substantial stone cathedral, convents, a seminary, etc. The long *Pier* juts out into the water for nearly a mile and is a favourite promenade of the summer-visitors, most of whom are French. The *Rimouski River* is an important salmon-stream, but is under lease. Good trout-fishing and shooting are, however, easily obtained. The harbour is protected by *St. Barnabé Island*, to which attaches a romantic legend.

We cross the deep and narrow gorge of a small stream flowing into Bic Harbour just before reaching (505 M.) *Bic* or *Ste. Cécile du Bic* (Bic House, \$11½; Hattie Bay Ho., \$1; boarding-house of Mme. Pineau), charmingly situated on a bay of the St. Lawrence, with a background of hills (1300 ft) and a foreground of islands. It is visited in summer by a few lovers of quiet, picturesqueness, and fishing.

L'Islet au Massacre, near Bic, derives its name from the story that 200 Micmac Indians were here slaughtered by the Iroquois, who built a fire in the mouth of the cave in which their victims had taken refuge.

Just beyond Bic the railway passes one of the most romantic pieces of scenery in its whole extent, running on a shelf cut out of the steep hills surrounding the village, with the cliffs rising 250 ft. above the train on the left, while below, to the right, lie the lowlands adjoining the St. Lawrence, as well as the river itself, here 25 M. wide — 514 M. *St. Fabien* (440 ft.). — About 3 M. to the S.E. of (524 M.) *St. Simon* is the pretty lake of that name, well stocked with fish. — 533 M. *Trois Pistoles* (100 ft.; Lavigne's Hotel, \$2; Dery's Hotel, \$11¼), a village with (1901) 2595 inhabitants. It is frequented to some extent by summer-visitors, and good fishing may be enjoyed in the *Trois Pistoles* and other waters of the district. Just beyond it we cross a high bridge over the pretty *Rivière Trois Pistoles*. At (543 M.) *Isle Verte* (Desjardins, \$11½) we are close to the St. Lawrence. — 552 M. *St. Arsène* is a convenient point from which to reach (12 M.) *Lake St. Hubert* for fishing. — 554 M. *Cacouna Station*, 2½ M. from the fashionable watering-place of *Cacouna* (p. 168, cab 50-75 c., bargaining advisable). — We now reach the station of —

560 M. *Rivière du Loup* or *Fraserville* (320 ft; *Commercial, Victoria, Ophir, Château Grandville*, \$2-2½; *Bellevue*, \$1½; *Venise, Maison Blanche*, \$1¼, these two near the pier at *Pointe à Pic*, see p. 168), a town of (1901) 4569 inhab., picturesquely situated on high ground on the *Rivière du Loup*, a little above its confluence with the St. Lawrence (steamboat-wharf, see p. 168). It is a railway-centre of some importance (see p. 95) and is also frequented as a summer-resort on account of its facilities for bathing, boating, shooting, and fishing.

The name of *Rivière du Loup* is said to be derived from the seals (*loup-marins*) that used to frequent its shoals, while *Fraserville* is in honour of the family of Fraser (long since Gallicised; comp. p. 158), in whom the seigniorial rights have for many years been vested — The most conspicuous building in the town is the *Parish Church*, a large edifice with a lofty spire. — A short way above the railway-bridge the *Rivière du Loup* descends about 200 ft. in a series of picturesque *Falls. — Good trout-fishing may be had in many lakes and streams within easy reach of *Rivière du Loup*. The salmon-fisheries are generally leased to private individuals, but a stranger can often obtain permission to try his hand. The adjacent woods abound in partridges, and water-fowl frequent the St. Lawrence and other rivers in great number. Caribou may be shot at no great distance. Information and guides may be obtained at the hotels.

FROM RIVIÈRE DU LOUP TO CONNORS, 113 M., *Temiscouata Railway* twice daily in 5½-7½ hrs. (fare \$3.80). Connection for Woodstock, Fredericton, and St. John, see below (carriages changed at Edmundston and McAdam Junction, where time is allowed for luncheon and supper) — This picturesque line runs to the S E, through a district rich in interest for the angler and sportsman. Beyond (43 M.) *Cabano* we reach the W bank of Lake Temiscouata, a narrow sheet of water, about 22 M. long, abounding in large-sized trout and 'tuladi', a heavy fish of the salmon family. Good shooting is obtained on its banks. The *Tuladi River*, entering the lake from the N E, is famed for its trout — 51 M. *Cloutiers Platform* (Cloutiers Hotel) and (52 M.) *Notre Dame du Lac* (Stone Ho; Rail Restaurant) are favourite sporting-quarters — Beyond the lake we follow the *Madawaska River* (left) and soon enter *New Brunswick* (p. 36). The *Madawaska Valley* is mainly peopled by descendants of the Acadians, who settled here after their expulsion from Nova Scotia (p. 73). — At (51 M.) *Edmundston* (Hebert Ho., \$1½; U.S. Agent), situated at the confluence of the *Madawaska* and the *St. John*, we connect with the C.P.R. for Woodstock, Fredericton, and St. John (see pp. 41, 40) — Our line now turns to the right (W) and skirts the N bank of the *St. John*, here forming the boundary between New Brunswick and Maine. 59 M. *St. Hilaire*, opposite *Frenchville* (Me.), 101 M. *Clavars*, opposite *Fort Kent* (Me.; ferry) — 113 M. *Connors* (Hotel Connors, \$1½-2) affords good headquarters for sport in the *St. François River District*.

From *Rivière du Loup* to *Quebec* and the *Saguenay* by steamer, see R. 33.

566 M. *Old Lake Road* is the station for *Notre Dame du Portage*, so called from the short 'portage' here (ca. 25 M.) between the *St. Lawrence* and the headwaters of the *St. John* (p. 33) — 571 M. *St. Alexandre*; 576 M. *St. André*, 579 M. *St. Helene*; 582 M. *Dersaint*. 585 M. *St. Paschal* is the station for the quiet watering-place of **Kamouraska** (*St. Louis*, *Windsor*, *Ward's*, *Labrie's*, \$¾-1), which lies 5 M. to the N.W., on the *St. Lawrence*, and affords good salt-water bathing. It possesses a large church and convent. Off-shore lie the *Kamouraska Islands* (p. 168). — 591 M. *St. Philippe de Neri*. — 595 M. *Rivière Ouelle* is the home of the *Abbé Casgrain*, the historian and antiquarian, and the scene of his romance 'La Jongleuse', based on the history of Mme. Houel, who was captured here by the Iroquois in the 17th century.

A short branch-line connects *Ouelle* with (7 M.) *Rivière Ouelle Wharf* (*Laurentide Hotel*, from \$1½, unpretending but well spoken of), whence a steamer crosses the *St. Lawrence River* to *Murray Bay* (p. 168), thus affording the shortest route (open all the year round) from *Montreal* to *Murray Bay* (comp. R. 29b).

600 M. **St. Anne de la Pocatière** (*Michaud Blanchet*, \$1) is a flourishing little town on the *St. Lawrence*, with a college (350-400 students; museum; agricultural school and model farm) and a large Convent of the Grey Nuns. — 616 M. *St. Jean Port Joli*, the chief scene of *De Gaspé's* story, 'Les Anciens Canadiens'; 620 M. *Trois Saumons*; 624 M. *L'Islet*; 628 M. *L'Anse à Gules*; 631 M. *Cap St. Ignace*. — We obtain a view of *Cap Tourmente* (p. 167), on the other side of the *St. Lawrence*, and cross the *Rivière du Sud*, which forms a small waterfall here, just before reaching (638 M.) *St. Thomas* or *Montmagny* (Commercial, Cote, \$1½; *Montmagny*, \$1), a town of (1901) 1919 inhab., with its college, convent, and large church. — The *Laurentide Mts* (p. 139) are now seen to the

right, beyond the St. Lawrence; the river itself is not visible, the plain stretching apparently to the foot of the mountains. 642 M. *St. Pierre*; 646 M. *St. François*; 651 M. *St. Valier* (p. 167), 654 M. *St. Michel* (p. 166). Beyond (661 M.) *St. Charles*, the junction of a direct line to Chaudière (p. 141), we traverse a fertile champaign country and again come into sight of the river. Beyond (670 M.) *Hurlaka Junction* several snow-sheds are threaded. 672 M. *St. Joseph*. The line skirts the St. Lawrence pretty closely and we enjoy good views (right) of the river, the S. side of the *Isle of Orleans* (p. 157), and the *Montmorency Falls* (p. 159).

674 M. *Lévis* and ferry thence to *Quebec*, see pp. 145, 157.

IV. PRINCE EDWARD ISLAND AND NEWFOUNDLAND.

Route	Page
25 Prince Edward Island	97
From Charlottetown to Tignish	100
From Charlottetown to Murray Harbour	101
From Charlottetown to Souris	101
From Mount Stewart to Georgetown	101
Magdalen Islands	102
26. Newfoundland	102
a St. John's	109
Walks and Drives in the Neighbourhood of St. John's.	111
b. From St. John's to Renew's Cape Race	113
c. From St. John's to Bonne Bay by Sea.	114
d. From St. John's to Griguët	115
e. From St. John's to Battle Harbour and the Coast of Labrador	117
Grand Falls of Labrador	118
f From St. John's to Battle Harbour viâ Bay of Islands	118
g From St. John's to Port-aux-Basques	119
From Brigus Junction to Harbour Grace and Car- bonear	120
From Carbonear to Clarendville. Heart's Content. Placentia	120
From Port Blandford to Bonavista Bay.	121
27. St. Pierre and Miquelon	124

25. Prince Edward Island.

APPROACHES The fine steamer 'Northumberland' of the *Charlottetown Steam Navigation Co.* leaves *Pictou* (p. 60) every week-day in summer for (50 M.) *Charlottetown*, on the arrival of the morning-train from Halifax (4-5 hrs.; fare \$ 2; meals 50 c; comp. R. 19) — The new and fast steamer 'Empress' of the same company leaves *Point du Chêne* every week-day, on the arrival of the morning-train from St. John and Boston and (in summer) of the 'Ocean Limited' from Montreal, for (36 M.) *Summerside* (2-3 hrs; fare \$ 1½, comp. p 87). — In winter the specially-built steamers 'Minto' and 'Stanley' ply from *Pictou* to *Charlottetown* and *Georgetown*, when the ice permits. When they cannot run, the mails are transferred to the ice-boat service mentioned at p. 86. A tunnel is in contemplation. — *Charlottetown* may also be reached by steamers of the *Quebec S. S. Co.* from *Montreal* and *Quebec* or by steamers of the *Canada Atlantic & Plant S. S. Co.* from *Halifax* viâ the *Strait of Canso* (comp. p. 63). — Steamers also sail from *Pictou* to *Georgetown* and *Souris* (comp p 60).

On leaving *Pictou Harbour* (p. 60), the *Charlottetown* steamer steers to the left (N.W.), passing through the *Caribou Channel*, with *Pictou Island* (4 M. long; lighthouse) at some distance to the right. *Caribou Island*, close to the mainland, on the left, also has a lighthouse. As we approach the other side of *Northumberland Strait*, dividing the mainland from *Prince Edward Island*, we see *Prim Point*, to the right, a flat promontory, with a lighthouse. This marks the entrance to *Hillsborough Bay*, across which we steer, a little to the W of N., towards *Charlottetown Harbour*. The bright red beaches of the island, due to the red sandstone which is the predominant factor of its geological structure, contrast strikingly with its green

foliage as we near the shore. We enter the harbour by a narrow channel between *Blockhouse Point* on the left and *Sea Trout Point* on the right. The harbour receives the waters of three rivers — the *Elliott* on the W. (l.), the *York* on the N.W., and the *Hillsborough* on the N.E. (r.). *Charlottetown*, see below. The hotels are within a few minutes' walk of the pier.

From *Point du Chêne* (p. 87), on *Shediac Bay*, the course of the steamer across *Northumberland Strait*, here 12-20 M. wide, is about N E. The first part of Prince Edward Island to come in sight is *Cape Egmont*, with its low cliffs of red sandstone. *Summerside* (p. 100) lies in the middle of *Bedeque Bay*. To the right lie *Indian Point* and *Indian Island*.

GENERAL SKETCH. Prince Edward Island, the smallest province of the Dominion of Canada, 150 M. in extreme length, 35 M. in extreme breadth, and 2133 sq. M. in area, lies in the S. part of the Gulf of St. Lawrence and is separated from the mainland by the *Strait of Northumberland*, 9-25 M. wide. The surface is level or slightly undulating and nowhere exceeds 500 ft. in height. The red soil, underlain by red sandstone rock, is fertile, and the island, one half of which is under cultivation, has a fair claim to the title 'Garden of the Gulf'. The natural richness of the soil is reinforced by 'mussel-mud' formed by vast deposits of decomposed shell-fish on the shore. Its scenery is hardly of a nature to repay a veteran traveller, but those who wish a quiet, cool, and inexpensive summer-resort with good boating, bathing, fishing, and (in autumn) shooting, will find many spots on the island to suit them. The waters surrounding its shores are warmer than those of the Bay of Fundy or the Maine Coast, being shallower and sheltered from the influence of arctic currents, and therefore much more suitable for bathing. Prince Edward Island is twice as densely populated as any other province, containing (1901) 103,250 inhab. or 48 to the square mile. About two-fifths of these are of Scottish descent, the rest being English, Irish, and Acadian French. There are also a few hundred Micmac Indians. About 45 per cent of the inhabitants are Roman Catholics. The chief occupations are agriculture and fishing; manufactures are unimportant and local in character. — Comp. 'Handbook of Prince Edward Island', by W. H. Crosskill (3rd ed., 1906).

HISTORY. Prince Edward Island is said, on very slight grounds, to have been discovered by Cabot in 1497. It is also said to have been visited by Champlain on St. John's Day, 1608, and to have been called by him *Isle St. Jean*. The Indian name was *Abegweit* or *Epaygust*, meaning 'anchored on the wave'. The island was included in the French domain of Acadia, but received no permanent European settlers till the cession of Nova Scotia to England (1713), when a few Acadians moved over here. In 1760, when it was formally ceded to the English, it contained over 4000 inhabitants. The island was at first annexed to Nova Scotia, and granted to 100 English and Scottish gentlemen, whose efforts at colonizing were not very efficacious. In 1770 it was made a separate province, but its name was not changed to its present form, assumed in compliment to the Duke of Kent, till 1799. In 1803 the Earl of Selkirk sent over 800 Highland colonists, and from then till 1850 the immigration was considerable. The province joined the Dominion of Canada in 1873.

Charlottetown (*Victoria*, \$2½; *Queen*, well spoken of, \$1½-2; *Revere Ho*, \$1-1½; *Lenox*, *Alexandra*, two private boarding-houses; U. S. Consul, *Mr. D. J. Vail*, Haviland St.), the capital of Prince Edward Island, is pleasantly situated on the S. side of the island, on an excellent harbour formed by the confluence of the *Hillsborough* or *East* (bridge, see p. 101), the *York* or *North*, and the *Elliott* or *West Rivers*. In 1901 the town contained 12,080 inhabitants. It is regularly laid out, and the width of the main streets (100 ft.) gives it a spacious and inviting air. Most of the buildings are of wood, but there are also many substantial structures of brick and stone. Charlottetown is the chief port of the island and carries

on a large export-trade in farm-produce and fish. It also has some woollen-mills — There is a *Tourist Information Bureau*, in Apothecaries' Hall, corner of Queen St. and Grafton St. (open 7 a.m. to 11 p.m.).

Port la Jole, as the French called Charlottetown, appears about 1750 as the seat of the executive of the island, with a fort and a small garrison; but no houses seem to have been erected on the site of the present city till 1768, under British rule. In 1775 the small capital was taken and plundered by two American cruisers, but Washington rebuked the officious privateers and sent back the captives and their property. In 1864 Charlottetown was the seat of the conference at which the project of Canadian confederation first took definite shape

The focus of Charlottetown life and activity is ***QUEEN SQUARE**, in which stand the principal public buildings, surrounded by grounds adorned with tasteful flower-beds. In the centre is the **Provincial Building**, a substantial stone structure, containing the *Legislative Assembly* (2nd floor), with portraits of P.E.I. statesmen, and the *Legislative* and *Dodd Public Libraries*. To the right (E.) rises the *Court House*, from the flat roof of which, as from the cupola of the Provincial Building, an excellent ³View is obtained of Charlottetown and its surroundings. In front of these buildings stands a monument to soldiers who served in the South African War (1899-1900). To the W. of the Provincial Building are the *Post Office* and the substantial new *Market House* (market-days, Tues. & Frid.). Round the square, especially on the S., W., and N. sides, are the best shops of Charlottetown. Band-concerts are frequently given in Queen Square on summer-evenings.

In *Great George St.*, a little to the S. of Queen Sq., rises the large and imposing *Cathedral of St. Dunstan* (R.C.).

To the E. of Queen Square is **HILLSBOROUGH SQUARE**, with the large *Convent of Notre Dame*. Adjacent, in Weymouth St., is the united *Prince of Wales College & Normal School*.

From the S.W. corner of Queen Square we may proceed along Queen St. to the *City Building*, and then follow Kent St. to the left, passing *Rochford Square*, *West Kent School*, and the *Armoury* (all on the right), to the Park Roadway, with the *Government House* (r.). The Park Roadway leads past *Fort Edward*, round the water-front, and through *Victoria Park*, with its cricket and lawn-tennis grounds. We return by the same route in order to enjoy the view of the harbour and of the city, above which rise the two prominent spires of St. Dunstan. If we are diving, it is best to return by way of Brighton Road to Queen Square.

On the heights on the N. outskirts of the city is the *College of St. Dunstan*, a large school for boys.

The large *Lunatic Asylum* occupies a point projecting into the East River, and near it is the *Trotting Park*. The *Belvidere Golf Links* lie 3 M. to the E. of the town.

The roads in the vicinity of Charlottetown are good and afford opportunity for pleasant if not especially picturesque drives (livery-rates very moderate). Among the favourite drives are those to (10 M.) *Pownal* (Florida, \$1½),

on Hillsborough Bay, *Hampton* (see below), *Keppoch*, (12 M.) *Brackley Beach* (p. 101), and (18 M.) *Tracadie Bay* (p. 101; fare \$ 4). — The water-trips are more inviting. A small ferry-steamer (bridge, see p. 101) crosses half-hourly to *Southport*, on the opposite side of the Hillsborough River (view from Tea Hill). Another ferry runs hourly to *Rocky Point*, a favourite holiday-resort, where there are an Indian encampment and the relics of *Port La Joie*, the early French capital of the island. — A steamer running to (18 M.) *Orwell* gives a good view of *Hillsborough Bay*. — Steamers also ascend the *East River* (to *Mt. Stewart*; a very pleasant trip) and the *West River* and run to *Hampton* (Pleasant View Hotel, \$ 1) — A somewhat longer excursion, very popular with the people of Charlottetown, skirts the shore to the W. to *Crapaud*. — *Boating and Sailing* can be enjoyed in the harbour, rivers, and bay
Railway Excursions, see below

The narrow-gauge **Prince Edward Island Railway** runs from one end of the island to the other, with a winding course of nearly 170 M. and various branches. Charlottetown itself is 5 M. to the S. of the main line, but through-trains run from it to each of the termini.

FROM CHARLOTTETOWN TO TIGNISH, 117 M., in 6-7³/₄ hrs. (fare \$ 3.50); to (49 M.) SUMMERSIDE in 2¹/₄-3 hrs. (\$ 1.45). — Leaving the station, at the E. end of the city, the train turns to the left (N.), quits the *Hillsborough River*, passes *St. Dunstan's* (see p. 99) and (3 M.) *Cemetery Station*, and joins the main line at (5 M.) *Royalty Junction*. Here it turns to the left and runs towards the W. through a fertile agricultural district of no marked features. Numerous comfortable farm-houses are seen, seldom clustering into villages. At (10 M.) *Milton* we cross the headwaters of the *York River*. 17 M. *North Wilshire*. Several snow-fences are passed here and at other parts of the line. — 24 M. *Hunter River* (Macmillan, \$ 1) is the station for (7 M.; stage) *Rustico* (Orby Point Hotel, \$ 1.30), on the N. shore one of the best bathing, boating, and fishing resorts in the island, with a good sandy beach. Farther on, the *Hunter River* flows to the left of the railway. — From (32 M.) *Emerald Junction* a branch-line runs to the left to (12 M.) *Cape Traverse*, where it connects with the winter mail-service to *Cape Tormentine* (see p. 86). — From (44 M.) *Kensington* (Clark, \$ 1¹/₄), a thriving village with 5-600 inhab., the quaint station-house of which is made of small round stones of the field, coaches run to (7 M.) *Malpeque*, at the mouth of *Richmond Bay*, with the *North Shore Hotel* (\$ 1-2). The head of *Grenville Bay* is seen about 4 M. to the N.E. The so-called *Malpeque oysters* have an excellent reputation. — Beyond *Kensington* the line runs to the S.W. and near (45 M.) *New Annapolis* reaches the narrowest part of the island, where the inroads of *Richmond Bay* on the N. and *Bedeque Bay* on the S. reduce its width to 3¹/₂ M.

49 M. *Summerside* (*Clifton*, \$ 2; *Queen*, \$ 1¹/₂; *Victoria*; U.S. Agent), a thriving little seaport of (1901) 2875 inhab., with an export-trade in farm-produce and the well-known *Malpeque oysters* (see above), is the terminus of the best steamboat-service between *Prince Edward Island* and the mainland (comp. p. 97). The train runs on to the wharf, alongside the steamer.

The line beyond Summerside calls for little remark. 54 M. *Miscouche*, with its two-spired church, to the right; 61 M. *Wellington*; 71 M. *Port Hill Station*, about 3 M. from the ship-building village on Richmond Bay. At (80 M.) *Portage* the island is only 4 M. wide. The N. end of the island, which we now reach, is largely inhabited by Acadians (p. 98). — 104 M. *Alberton* (Seaforth, Albion Terrace, \$1½; U.S. Agent), on the attractive *Cascumpec Bay*, seen to the right as we approach, is a prosperous ship-building and fishing village (800 inhab.). The train backs out of this station, which is one of the N. termini of the line, and runs towards the N.

117 M. *Tignish* (*Belleville*, *McKenna*, \$1½), the terminus of the railway, is a small village (450 inhab.) but of importance for its fisheries. The inhabitants, who are French and Highland Roman Catholics, support a large church and convent.

Tignish is about 8 M from *North Cape*, the northernmost extremity of the island (lighthouse, 47° 3' N lat.)

FROM CHARLOTTETOWN TO MURRAY HARBOUR, 48 M., railway in 3¾ hrs. (fare \$1.45). This new line, opened in 1906, traverses a rich agricultural district. — Leaving Charlottetown, the train crosses the Hillsborough River by a fine steel bridge, ¾ M long. 2 M. *Southport* (p. 100), 9 M. *Mt. Albion*; 13 M. *Lake Verde*; 20 M. *Uigg*, 32 M. *Melville*, 40 M. *Hopefield*; 44 M. *Murray River*. — 48 M. *Murray Harbour*, on the estuary of the Murray River, near *Cape Bear*.

FROM CHARLOTTETOWN TO SOURIS, 60 M., railway in 3-4 hrs. (fare \$1.80), to GEORGETOWN (46 M.) in 2-3¼ hrs. (fare \$1.40). — From Charlottetown to (5 M.) *Royalty Junction*, see p. 100. Here we turn to the right (N.E.) and ascend the fertile valley of the *Hillsborough River* (not visible at first). — 9 M. *York* is the station for the small seaside-resorts of *Brackley Beach* (Shaw's, Sea View, \$1-1½) and *Stanhope* (Mutch's; Cliff, well spoken of, \$1½-2), noted for its interesting *Cliff. — 14 M. *Bedford* is the station for the **Acadia Hotel* (good cuisine; \$2), situated 4½ M. to the N., on *Tracadie Bay*, the site of an early Acadian colony (carriages to meet the trains during the season). The attractions of this resort include golf-links, a good sandy beach, and mackerel-fishing in the bay. — Beyond (17 M.) *Tracadie* we see the Hillsborough to the right. — 22 M. *Mount Stewart* (Clark, Manson, \$1), a ship-building village with 600 inhab., near the head of the Hillsborough River, is the junction of the branch-line to *Georgetown* (see below).

FROM MOUNT STEWART TO GEORGETOWN, 24 M., railway in 1¼-1½ hr. — This line crosses the Hillsborough and runs towards the S.E. The chief intermediate station is (18 M.) *Cardigan*, at the head of navigation on the *Cardigan River* — 24 M. *Georgetown* (*Aulken*, *Tapper*, \$1½; U.S. Agent), a small seaport with (1901) 1123 inhab., situated on a peninsula between the rivers *Cardigan* and *Brudenell*. It carries on a brisk trade in agricultural produce. Steamers ply hence to *Lower Montague*, *Charlottetown* (p. 98), *Pictou* (p. 60), and the *Magdalen Islands* (p. 102).

The Souris train keeps to the N. of the Hillsborough River and runs towards the E. Beyond (31½ M.) *Morell*, on the *Morell River*

(good fishing), we skirt *St. Peter's Bay* (left). 38½ M. *St. Peter's* (Bayview Hotel), a village with 500 inhab., at the head of the bay, carries on a considerable trade. The sea-trout in the bay afford good sport.

60 M. *Souris* (*Sea View, Imperial, \$11½; U.S. Agent*), a village with (1901) 1140 inhab., lies on *Colville Harbour*. It carries on a trade with the French island of *St. Pierre* (p. 124), and steamers ply hence to *Pictou* (p. 60), the *Magdalen Islands* (see below), and various Cape Breton ports. It is about 14 M. from *East Point*, the end of the island in this direction.

About 50 M. to the N. of East Point, in the Gulf of St. Lawrence, are the *Magdalen Islands*, reached in about 16 hrs. by a steamer sailing from *Pictou* (p. 60) on Mon. & Thurs. and calling at *Georgetown* (p. 101, Thurs. only) and *Souris* (see above). They are sometimes visited for the sake of the sea-trout fishing; but the accommodation for tourists is of the most primitive description. Of the thirteen islands, which have a total population of about 5000 hardy Acadian fishermen, the largest is *Coffin Island*, and the most important *Amherst* (Shea Ho; Noel). During the cod and mackerel fishing-seasons the islands are frequented by hundreds of Canadian and American boats. The industries of lobster fishing and canning are also important, and in winter seals are sometimes captured on the floating ice. The *Bird Isles* are haunted by immense numbers of sea-birds of various kinds. *Deadman's Isle*, besung by Tom Moore, lies about 8 M. to the W. of Amherst. See 'In and Around the Magdalen Islands', a pamphlet by A. M. Pope.

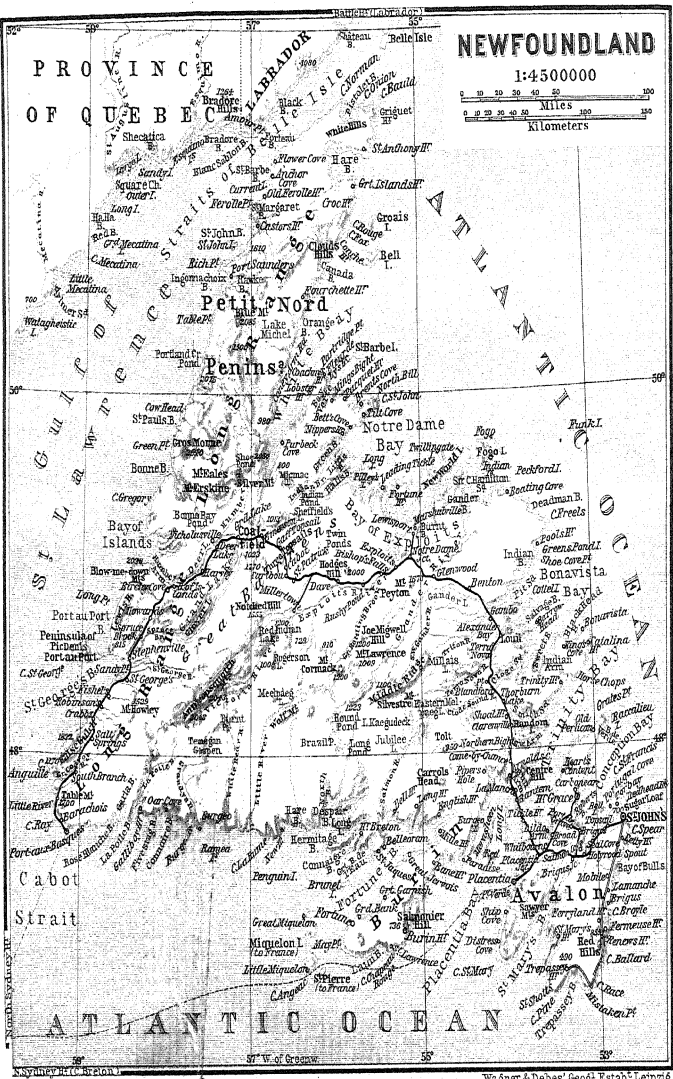
26. Newfoundland†.

Approaches. *St. John's* (p. 109) is reached from *Halifax* (p. 50; 490 M.) in about 2 days by the steamers of the *Red Cross Line*, sailing every 7 days (saloon fare \$18), and of the *Furness Line*, sailing fortnightly (fare \$15). Steamers of the *Allan Steamship Co.* (agents at *St. John's, Shea & Co.*) call at *St. John's* fortnightly on their way from *Glasgow* and *Liverpool* to *Halifax* and *Philadelphia*, but do not call at *Halifax* on their eastward trip (fare from *St. John's* to *Halifax* \$20). The vessels of all three lines are reported to be safe and comfortable. — From *Montreal* (p. 125; 1070 M.) *St. John's* is reached in about 6 days by steamers of the *Dobell Line* (fare \$25), sailing fortnightly. — From *New York* (p. 10, 1100 M.) *St. John's* is reached by steamers of the *Red Cross Line* in 5½ days, including a 'stopover' of ½-1 day at *Halifax* (comp. above, fare \$34). — From *Liverpool* (1930 M.) *St. John's* is reached in 7 days by steamers of the *Allan Line* and the *Furness Line* (see above), each sailing fortnightly (fare \$45-60). — From *Glasgow* *St. John's* is reached in 7 days by fortnightly steamers of the *Allan Line* (fare \$60). — Newfoundland is also reached from all parts of the United States and Canada by the steamer '*Bruce*', sailing thrice weekly between *North Sydney* and *Port-aux-Basques*, in close connection with the Intercolonial Railway and the Reid Newfoundland Co. (see pp. 68, 118). The sea-trip on this route takes 6 hrs. only. The whole journey from *North Sydney* to *St. John's* takes 36 hrs. (fares \$12 60, \$5 35).

General Sketch. The large island of Newfoundland†† occupies a peculiarly commanding position off the shores of the Dominion of Canada

† This account of Newfoundland was originally supplied by the late Rev. Dr. Moses Harvey, author of 'Newfoundland, the Oldest British Colony', but has since been materially revised and lengthened.

†† The natives usually accent the word on the last syllable ('New-fundland'), the English on the second, the Americans on the first. The first pronunciation is preferable, the second allowable, the third inadmissible.



NEWFOUNDLAND

1:4500000



PROVINCE
OF QUEBEC

ATLANTIC OCEAN

Stretching right across the entrance of the Gulf of St Lawrence, it affords access to its waters both at the N and S. extremities. The S W. shore, at one point, approaches within 50 M. of Cape Breton, while its N. extremity is within 12 M. of the coast of Labrador, from which it is separated by the *Straits of Belle Isle* (p 3) It might be compared to a huge bastion, thrown out into the N Atlantic, which, if duly fortified and armed, could be made the Gibraltar of the surrounding seas *Cape Spear*, its easternmost projection, is but 1690 M from the coast of Ireland, so that it forms as it were a stepping-stone between the Old and New Worlds. In regard to size, it ranks tenth among the islands of the globe. Its greatest length, from *Cape Ray* on the S W. to *Cape Norman* on the N, is 317 M; its greatest breadth, from *Cape Spear* to *Cape Anguille*, is almost the same. It lies between $46^{\circ} 36' 50''$ and $51^{\circ} 39'$ N. lat and between $52^{\circ} 37'$ and $59^{\circ} 24' 50''$ W long. Its area is 42,000 sq M, or about one-sixth larger than Ireland and almost equal to the State of New York. Its circumference, measured from headland to headland, is about 1000 M., but so deeply indented is it by bays and arms of the sea, that its coast-line is almost double that extent. In shape it is roughly triangular.

A glance at the map shows that it is almost cut in two by the large bays of *Placentia* and *Trinity*. The S peninsula thus formed is called *Avalon* and is joined to the main body of the island by an isthmus which at its narrowest point is but 3 M. in width. A long narrow peninsula called *Petit Nord*, stretches northerly to the Straits of Belle Isle. The S.E. peninsula, having an extensive frontage on the Atlantic and many fine harbours and bays in proximity to the best inshore fishing-grounds and the Great Banks, is by far the most thickly populated and commercially important part of the island (comp p 110)

The coasts of Newfoundland are guarded by ramparts of rock, rising in bold cliffs and headlands to a height of 300-400 ft. At frequent intervals, however, this repellant wall is cleft by deep fjords, often 30-50 M. wide at their mouths and running 50-90 M. into the land, while smaller branches diverge on either side. These splendid bays are not only of immense economical importance, as bringing the fish, so to speak, up to the very doors of the fishermen, but are also possessed of such grandeur of scenery as will rank them, when better known and more accessible, as the equals of the best that Norway has to show.

On leaving the rugged coast-line we find the outer interior of the island to be a hilly country with eminences of no great elevation. Around the heads of nearly all the bays are large tracts of good land, covered with fine timber and fit for agricultural and grazing purposes. The inner interior is an elevated undulating plateau traversed here and there by ranges of low hills, the surface being diversified by valleys, woods, countless lakes and ponds, and numerous marshes, which are generally shallow and could easily be drained. Fully a third of the surface of the island is covered with these lakes and lakelets, which abound in trout and land-locked salmon. All the great hill-ranges have a N E and S W. direction, and all the other physical features, such as bays, lakes, and rivers, have a similar trend, the cause of this conformation being doubtless glacial action. The principal mountain-ranges are the *Long Range*, running parallel with the W. coast; the *Cape Anguille Range* or *False Gulch*, in the S.W. corner; the *Blomidon* or *Blow-me-down Mts.*, adjoining the Bay of Islands (W. coast); and the *Sawyer Mts* and other heights in the peninsula of Avalon (see above). A set of remarkable isolated, sharply-peaked summits, known as '*Tolts*', are distributed over the interior, rising abruptly at intervals out of the great central plateau, and forming admirable landmarks for the Indian or the sportsman.

The three largest rivers are the *Exploits*, the *Humber*, and the *Gander*. There are numerous smaller streams fairly entitled to rank as rivers. It is along the valleys traversed by the various rivers that the greatest extent of fertile lands and the heavy forest-growth are found, and now that these valleys are made accessible by the new railway across the island, it may be expected that they will become the seats of a large agricultural population. At present, agriculture is carried on upon a com-

paratively small scale, the attention of the people being mainly devoted to the fisheries. The area of land at present under culture does not exceed 130,000 acres. The reports of the Geological Survey show that in the great valleys alone there are nearly 3,000,000 acres fit for settlement and capable of sustaining a large population; while the aggregate of areas elsewhere of arable and grazing land is 2,000,000 acres. There are, however, vast areas which are hopelessly barren, while the interior proper is yet but partially explored.

Grand Lake (p. 122), the largest in the island, is 56 M in length and 192 sq. M. in area. *Red Indian Lake* (near the centre of the island) is 37 M. long, with an average width of 2 M. *Gander Lake* (p. 121), through which a river of the same name flows, is 33 M in length. The scenery around these lakes is generally very fine.

Minerals. Among the copper-producing countries of the world Newfoundland takes a high place. Iron-pyrites of the best quality is found in many localities; and from a mine in *Pilley's Island*, in *Notre Dame Bay* (p. 116), this ore is now shipped in large quantities. Rich deposits of lead, holding a large percentage of silver, are found in *Placentia* (p. 120) and *Port-au-Port* (p. 115). The carboniferous rocks are largely developed in *St. George's Bay* (p. 115), where there is a coal-area 25 M wide by 10 M in breadth. Promising coal-seams were worked near *Grand Lake*, and extensive deposits have been discovered in *Codroy Valley* (p. 123). Large deposits of iron ore have been found at *Conception Bay* and *Bay de Verde* (comp pp. 119, 120). Petroleum and asbestos have also been recently discovered. Gold occurs at *Cape Broyle* (p. 113) and in *Ming's Bight* (between *Notre Dame Bay* and *White Bay*). Gypsum, marbles, roofing-slate, and building-stone are abundant in several localities. — The total value of minerals exported in 1903-4 was \$1,288,565.

Fisheries. The cod-fishery of Newfoundland is the most extensive of the kind in the world, and its average annual value (about \$6,000,000) amounts to three-fourths of the entire fishery-products. The export of dried cod per annum averages 1,360,000 quintals or cwt.s. The seal-fishery is next in value. The number of seals taken in different years varies greatly. In 1901-2, 528,120 skins were exported, valued at \$420,869, being more than thrice as great as the value exported in 1897-98, and one-and-a-half times the value of 1903-4. The catch of 1906 was also large. The value of canned lobsters exported annually is about \$410,000. The centres of the herring-fishery are *Labrador* (p. 117), *St. George's Bay* (p. 115), *Fortune Bay* (p. 114), *Placentia Bay* (p. 114), and the *Bay of Islands* (p. 115). The value of the salmon-fishery is about \$75,000 per annum. The number of persons engaged in catching and curing fish is about 55,000. The riches of the encompassing seas are seemingly inexhaustible. At a day's sail from the E. shore are the *Great Banks* (p. 113), 600 M long, with their swarming fish-life, while the whole Atlantic coast of Labrador, 1100 M. in length, is under the jurisdiction of Newfoundland and as a fishing-ground is of incalculable value. Whale-fishing was also revived some years ago, and 1275 whales were caught in 1903-4, yielding 1,788,304 gallons of oil, besides other products. Since then, however, the whale-fishery has steadily declined.

Imports, Exports, and Revenue. In 1904-5 the total value of the exports was \$10,619,342; of the imports \$10,279,293. The revenue for the same year was \$2,295,960, and the public debt \$22,045,338.

Climate. The climate of Newfoundland, being insular, is variable and subject to sudden changes. The intense summer heats of the United States and Canada and the fierce colds of their winters are alike unknown. It is but rarely, and then only for a few hours, that the thermometer sinks below zero (Fahr.) in winter; and in summer it is but seldom that 80° are reached. That the climate is salubrious is evidenced by the robust healthy appearance of the people, and the great age to which numbers of them live. The Arctic current, washing the E. shores, shortens the summer. Fogs are confined to the Great Banks and to the S. and S E. shores. The weather in W. Newfoundland is very fine and the vegetation generally a month in advance of that on the E. coast. The summer,

though short, is generally delightful. The heat is never oppressive, the nights are cool; days bright and balmy often succeed each other for weeks together. Those who wish to escape from the relaxing and oppressive heats of the continent will find an agreeable refuge here. September and October are generally pleasant months, in which the sportsman can enjoy himself in pursuit of caribou, grouse, snipe, curlew, etc. Tornadoes and cyclones are unknown, and thunder-storms are rare. Usually the autumn is prolonged into November, and the snow seldom covers the ground permanently till near Christmas.

Population. According to the census of 1901, the population is 224,931. In this are included 3947 white residents in Labrador and 1400 Eskimo. The people are entirely derived from Saxon and Celtic stocks. The representatives of the former number 148,942, of the latter 75,909. They are a vigorous, hardy, energetic people. The great bulk of them lead a healthy open-air life, engaged in the fisheries. They are kindly, simple in their manners, quick and intelligent, law-abiding, and noted for their friendliness towards strangers. Their fishing-settlements, villages, and hamlets are sprinkled all around the shores, often in the most curious and picturesque situations among the clefts of the rocks. Their fishing-stages and 'flakes' for drying codfish constitute a special feature at all the fishing-centres. — The *Beothuks* or *Beothuks*, the aborigines of Newfoundland, were a branch of the Algonquin race (comp. p. xlvi). Though once numerous and powerful, they have gradually disappeared before the advance of the white man, and no living Beothuk has been seen since 1823 (comp. p. 111).

History. Newfoundland was discovered by *John Cabot* in 1497. There is little doubt, however, that it had been known 500 years previously to the Norsemen, who named it *Helluland*, or the 'land of naked rocks'. When Cabot made his discovery he was in the service of Henry VII. of England, from whom he had obtained a patent authorizing his search for new lands; and his ship was manned by Englishmen (largely from Devon). He was the first discoverer of the continent of North America. Thus by right of discovery, Newfoundland belonged to England.

Judge Prowse (see p. 109) divides the history of Newfoundland into four main epochs. The first of these, lasting from 1497 to about 1610, he describes as a time when the island 'was a kind of no-man's-land. . . . frequented alike by English and foreign fishermen, ruled in a rough way by the reckless valour of Devonshire men, half pirates, half traders'. English fishermen frequented the island from the year after Cabot's discovery, and the news of the abundance of fish in Newfoundland waters very quickly reached the ears of the Portuguese and of the French fishermen of Normandy and Brittany. All these hardy mariners were soon busily employed in taking cod on the Great Banks and near the shore, and they were followed in 1542 by the Basque or Biscayan fishermen, who gave the name of *Baccalaos* ('cod-lands') to Newfoundland and the neighbouring coasts. In 1578 no fewer than 400 fishing-vessels were employed, of which 150 were French and only 50 English, but the latter, though in so marked a minority, seem to have been more or less recognized as the rulers of the fishing community. In 1600 there were 200 English vessels at work, which employed 10,000 men and boys, as catchers on board and curers on shore, and the Newfoundland fisheries became the stay and support of the W. counties of England, being worth 100,000 £. annually — an immense sum in those days. Thus the attraction which first led Englishmen to these W. seas and first induced them to colonize the new lands was the immense fish-wealth in the waters around Newfoundland. The same impulse brought the French to the St. Lawrence and led to the long struggle between the two nations. The fisheries laid the foundation of the empire won by England in the New World.

The second great period extends from 1610 to 1713 and may be described as an era of 'struggle between the permanent settlers and the Western adventurers, or ship fishermen from Devon'. After the days of Cabot, various attempts were made to colonize the island, but none proved successful. The most conspicuous of the attempts were made by *Sir George*

Calvert, afterwards Lord Baltimore, and at a later date by *Sir David Kirke* in 1638 (comp. p. 113). Previously, however, in 1615, *Captain Richard Whitbourne*, mariner, of Exmouth, Devonshire, was sent out by the British Admiralty to regulate matters among the fishing-population, which had greatly increased. He wrote the first book on Newfoundland ('Westward Ho' for Avalon'), which is now rare and valuable. In 1583 *Sir Humphrey Gilbert*, half-brother to *Sir Walter Raleigh*, landed in Newfoundland, armed with letters patent from Queen Elizabeth authorizing him to colonize the island and exercise jurisdiction over all the neighbouring lands within 200 leagues in every direction. He was, however, lost at sea on his return voyage, so that nothing came of this attempt at colonization. Meantime, however, the hardy industrious fishermen were forming settlements around the shores of the island, increasing in numbers and trying to make homes for themselves. But the difficulties they had to contend with in doing so were of a very formidable character. The fisheries had all along been carried on by merchants, ship-owners, and traders, who resided in the W. of England. For their own profit and advantage they wished to establish a monopoly and to retain the harbours and shores for their own servants, whom they sent out to carry on the fishery each summer and to return before winter. Hence their aim was to prevent settlement, the building of houses, and the cultivation of the soil. Being wealthy and influential men, they had the ear of successive English governments, whom they induced to pass laws to enable these 'Merchant Adventurers', as they were called, to accomplish the end they had in view. They were successful, too, in misleading the nation by false statements about the barrenness of the soil and the necessity of preserving the fisheries as a nursery of seamen for the Royal Navy. Hence laws were passed prohibiting masters of vessels from carrying out any settlers, and binding them to bring back at the close of each fishing-season the fishermen who went out in spring. When it was found that settlement went on in spite of these restrictions, an order was issued to burn down all the houses — an edict which the humanity of the English Commissioner happily made him hesitate to put in execution and which, on strong remonstrances to the King, was revoked. The 'Fishing Admirals', as the representatives of the merchants were called, long oppressed and robbed the people, taking possession of the best fishing-grounds and driving the inhabitants from their own fields.

At length a better day dawned. England found out her mistake and the deception that had been practised on her. The country ceased to be a mere fishing-station and was at last recognized as a colony of the British Empire. The third great period, that of the colony under naval governors (1711-1832), may be said to begin with *Captain Crouse* (1711), though *Captain Osborne* was the first to receive a formal appointment (1729). The Treaty of Utrecht, in 1713, ended the long struggle between the French and English fishermen. In carrying out their plans for founding an empire in the New World, the French statesmen had been eager to obtain possession of Newfoundland. They knew that holding it, they could control the fisheries and also command the narrow entrance to the St. Lawrence and their possessions in Canada. They obtained a footing, at length, on the S. shore and founded *Placentia* (see p. 120). During the long wars between the two nations, the French sent out several expeditions for the conquest of the island, but without success. Their presence and encroachments, however, were a constant source of loss and annoyance to the settlers. By one of the articles of the Treaty of Utrecht France agreed to surrender all her possessions in Newfoundland and to evacuate *Placentia*. The sovereignty of the whole island was thus secured to England, and the French renounced all territorial rights. Unfortunately, however, the treaty gave them certain privileges that led to a long series of disputes which were not settled till just the other day (see pp. 107, 108). In 1729 the resident population was 6000. Some semblance of civil government was now gradually introduced. Improvements came very slowly. In 1750 a court for the trial of criminal cases was established. Till then all criminals had been sent to England for trial. It was not till 1792 that a Supreme Court for the whole island was appointed, with power to try

all offenders and determine suits of a civil nature; and its jurisdiction, moreover, was not completely established till 1826. It was not till 1813 that houses could be erected without the written permission of the governor or that grants of land could be made. No other British colony was ever dealt with so harshly. Not without reason did Lord Salisbury describe the colony as having been throughout its career 'the sport of historic misfortunes'.

Still, the sturdy fishermen held their ground, contended for their liberties, and continued to increase in numbers. In 1763 the population numbered 13,000, in 1804 it reached 20,000. An agitation for a local government commenced, and in 1832 'representative government' was granted. The first local Legislature was opened in 1833. This marks the opening of the fourth or modern period. In 1854 the privilege of self-government was completed by the concession of 'responsible government'.

The progress of the colony during the last sixty years has been steady and substantial. Civilizing influences have been at work. An educational system has been established and, of late, considerably improved. Agriculture has been encouraged, and manufactures of various kinds commenced. In 1858 the first Atlantic cable was landed on the shore of Trinity Bay (p. 116). In 1884 the first railway from St. John's to Harbour Grace was opened (p. 120). In 1893-93 the line was extended across the island to Bay of Islands and St. George's Bay, having its W. terminus at Port-aux-Basques, 90 M. from Cape Breton (comp. p. 119). In 1894 the failure of two local banks entailed great losses on the community.

Relation to Canada. Judging by the geographical position of the island, it would seem that by 'manifest destiny' it belongs to the Dominion of Canada, and should long since have become a member of that great confederacy of British provinces. The bulk of its people, however, seem to think differently, and have hitherto declined to unite with Canada. Attempts were made in 1869 and 1895 to bring about a union, but without result. Since that date Confederation has not been made a political issue. The sentiment of loyalty to the flag of England is strong, and no proposal of annexation to the United States has ever yet taken shape. The position of the island, as holding the key of the St. Lawrence, and thus being essential to the rounding off and safety of the Dominion, precludes the idea that it would ever pass from under the flag of England.

Constitution. The form of government which now regulates the affairs of the Colony, and which is working on the whole satisfactorily, is that known as 'Responsible Government'. It consists of a *Governor*, who is nominated by the Crown, his salary of \$12,000 a year being paid by the Colony; an *Executive Council*, chosen by the party commanding a majority in the Legislature, and consisting of seven members, the Governor being President or Chairman; a *Legislative Council* of fifteen members, nominated by the Governor in Council; and a *House of Assembly*, at present consisting of 36 members, elected every four years by the votes of the people. There are 18 electoral districts. The members of the House of Assembly are elected by ballot. All males on reaching the age of twenty-one are entitled to vote. The members of both branches of the Legislature are paid. The Legislature meets once a year. Acts become law after passing both chambers and receiving the assent of the Governor.

The French Treaty Rights in Newfoundland. The sovereignty of the island, as has been stated (see p. 106), belonged wholly to Great Britain, but, in virtue of certain ancient treaties, the French had the privilege of taking and drying fish on that portion of the coast which extends from *Cape Ray*, round the W. and N., to *Cape St. John* on the N.E. shore. They had no right to occupy permanently, or to settle on any portion of the coast, or to erect any buildings, except such huts and scaffolds as might be necessary for drying their fish. French fishermen were not permitted to winter on the island. The treaties in which these concessions were made to the French are those of Utrecht (1713), Paris (1763), Versailles (1763), and the second treaty of Paris (1815). A serious difference of opinion existed for more than a century between England and France as to the proper interpretation of these treaties, the language of which is often obscure. The French contended that the treaties gave them the *exclusive* right to the

fisheries, and also to the use of the shore, so that British subjects could not lawfully fish within those limits, or occupy the land for any purpose. Had this contention been well founded, it would have entirely closed up the best half of Newfoundland against its use by British subjects, in order that along a coast 450 M. in length a few French fishermen might, during three or four months of the year, catch and dry codfish. Such a dog-in-the-manger policy would have prevented either party from cultivating the land, or carrying on mining or lumbering operations. England and her subjects in the colony always repudiated this interpretation and maintained that they had a *concurrent* right of fishing wherever they did not interfere with the operations of French fishermen; and also that they had a right to settle on the land and develop its resources. In point of fact, over 17,000 British subjects settled on the Treaty Shore. Custom-houses were erected, magistrates appointed, and law-courts established on this coast; and two members elected by the inhabitants represented them in the local legislature. This, of course, added considerably to the complications of this vexed question. However, by the Anglo-French treaty of 1904, the French formally resigned their former rights in Newfoundland, in return for a sum of money, a free hand in Morocco, and a concession in West Africa, and the islanders now have entire control of their own island.

The French Shore question has been replaced by a new difficulty arising from the failure of the U.S. Senate to ratify the so-called Hay-Bond Compact, by which freedom for the purchase of bait by American fishermen would have been secured in exchange for a reduction of the tariff on numerous articles imported into Newfoundland from the United States. In 1905 and 1906 acts were passed by the Newfoundland Government to prohibit the exportation of bait and to prevent the hiring of native Newfoundlanders for the crews of foreign vessels. The result of this has been to inflict great injury on the American fishing-fleet and the French fishing-industry at St. Pierre has been practically ruined (comp. p. 124).

Sport. The chief objects of the chase in Newfoundland are the *Caribou* (*Rangifer tarandus Terra-novae*) and the *Partridge* or *Willow Grouse* (*Lagopus albus*). The season for the former lasts from Oct. 20th to Feb. 1st and from July 31st to Oct. 1st. that for the latter from Oct. 1st to Jan. 12th. Non-residents of the Colony require a license for shooting caribou (fee \$50-80). Not more than three stags and one doe may be killed by one sportsman in the same season. Other game includes hares, rabbits, wild geese and ducks, curlew, snipe, plover, otter, and beaver (close time for otter and beaver April 1st to Oct 1st). *Salmon* (close time Sept. 15th to Jan. 15th) are found in all the principal rivers, and *Trout* (close time Sept. 15th to Jan. 15th) abound in all the streams and lakes. — Lists of licensed Guides are given in the guidebooks of Judge Prowse and the Railway Co. (p. 109).

Money. The monetary system of Newfoundland is similar to that of Canada, and Canadian coins pass at full value (see p. xi). British gold coins pass current at the rate of 1*l* = \$4.86, while U. S. gold coins and bills are taken at their face value in ordinary trade. British silver coins circulate at the rate of 1*l*. = \$4.80.

Postal Information. The letter-rate of postage within Newfoundland is 2 c. per oz.; to Canada, Great Britain, and certain British Colonies 2 c. per 1/2 oz.; to the other countries of the Postal Union 5 c. per 1/2 oz.; letters for delivery within the city 1 c. per oz. Parcels to Canada cost 15 c. per lb., to the United States 12 c. per lb., to the United Kingdom 24 c. for 3 lbs. 48 c. up to 7 lbs. The other regulations are similar to those of Canada (p. xxi). — The Telegraph Rate from St. John's to places in Newfoundland varies from 20 c. for 10 words and 2 c. for each additional word to 50 c. per ten words and 4 c. per additional word. The rate to the nearest parts of Canada and the United States are \$1-11/4 per 10 words and 9-11 c. for each additional word to Great Britain 25 c. per word. — *Express Orders* issued by recognized express companies, are cashed at their face value by the *Newfoundland Express Co.* in any part of the island.

Bibliography. The best history of Newfoundland is *D. W. Prowse's* 'History of Newfoundland from the Records' (2nd ed., 1896). The reports of the *Newfoundland Geological Survey* and the official 'Year Book and Almanac of Newfoundland' will be found useful. Among other works that may be mentioned are 'Newfoundland the Oldest British Colony', by *Joseph Hatton* and *Rev Moses Harvey* (1883), *Bonnycastle's* 'Newfoundland' (1842), *Beckles Willson's* 'The Tenth Island' (1897), *Prof. J. B. Jukes's* 'Excursions in and about Newfoundland' (1812), and 'The Newfoundland Guide Book', edited by *D. W. Prowse* (London, 1905). The *Reid Newfoundland Co.* also issues a yearly guide (gratis) to Newfoundland and Labrador.

a. St. John's.

The approach to St. John's† by sea excites the admiration of even the most blasé traveller. As the steamer skirts the iron-bound coast, it suddenly turns towards the shore and appears as if about to dash itself against the rocks. Presently, however, a narrow opening appears in the wall, and as the vessel glides through this, we see above us huge cliffs of dark-red sandstone piled in broken masses on a foundation of gray slate rock. On the right towers an almost perpendicular precipice, 300 ft. high, above which rises the crest of *Signal Hill* (508 ft.), with the station for signalling vessels as they approach the harbour. On the left the rugged hill attains a height of 600 ft., and from its base juts out a rocky promontory bearing the *Fort Amherst Lighthouse*. The *Narrows*, or channel leading to the harbour, is $\frac{1}{2}$ M. long, and at the narrowest point, between *Pancake* and *Chair Rocks*—across which in olden days a chain could be drawn to shut out hostile cruisers—it is only 600 ft. wide. It is not till near the end of the Narrows that the city becomes visible. Beyond the channel the harbour trends suddenly to the W., so that it is completely land-locked and safely sheltered from the waves of the Atlantic. Vessels of the largest tonnage can enter at all periods of the tide, the rise of which does not exceed 4 ft. The harbour is fully 1 M. long and nearly $\frac{1}{2}$ M. wide.

St. John's.—Arrival. *Custom-House Officers* meet the steamer to examine and pass the passengers' luggage. — *Cabs* also meet the steamers (fare to hotel, incl. ordinary luggage, 40-50c.).

Hotels. *CROSBIE HOTEL*, \$1½-2; *COCHRANE HOUSE*, *BALSAM HOUSE*, from \$2½; *WAVERLEY*, *TREMONT HOUSE*, *CITY*, unpretending, \$1-1½. None of the hotels are first-class — *Board and Private Lodgings* can be easily obtained. — *Good Port Wine* is a specialty of St. John's.

Cabs: 30-50c. per drive within the city; 80c. per hr.; \$4-5 per day. — *Electric Cars* run past the railway-station along *Water St.* and make the circuit of the city by way of the *Military Road* along the crest of the ridge. — *Mail Waggon*s run to *Portugal Cove*, *Petty Harbour*, *Ferryland*, *Torbay*, etc. — *Steamers* ply to various points on the Newfoundland coast (comp. pp. 114, 115), to *Labrador* (see p. 117), to *Halifax* (see p. 102), to *Montreal* (see p. 102), to *Sydney* (p. 67), to *New York* (see p. 102), to *Liverpool* (see p. 102), to *Glasgow* (see p. 102), and other ports.

† This is the recognized official spelling, though the weight of the older authorities is in favour of *St Johns* (without the apostrophe), following the analogy of *St. Ives*, *St. Kitts*, and similar names.

Post Office, Water St. (open 7.30 a.m. to 9 p.m., comp. p. 108). — Telegraph Office, Water St. (open 8.30 a.m. to 9 p.m.). — Anglo-American Telegraph Co., Exchange Building (open 8.30 a.m. to 9 p.m.).

Banks. *Bank of Montreal; Bank of Nova Scotia, Merchants' Bank; Royal Bank of Canada, Government Savings Bank* (all open 10-3). — Three daily papers are published: the *Daily News*, the *Evening Herald*, and the *Evening Telegram* (1c. each). There are also three weekly papers: the *Free Press*, the *Trade Review*, and the *News*.

Consuls. U.S., *Mr. G. O. Cornelius*, German, *Mr. Kenneth R. Prowse*; Italian, *Mr. Henry J. Stabb*; French Vice-Consul, *Mr. J. F. Rigoreau*.

St. John's, the capital of Newfoundland, is situated on the E. side of the peninsula of *Avalon* (p. 103), in 47°33'3" N. lat. and 52°45'10" W. long., 60 M. to the N. of *Cape Race* (p. 113), 600 M. from Halifax, 1070 M. from Montreal, 1100 M. from New York, and 1700 M. from Queenstown (about 1000 M. nearer than New York). The ground on which it lies rises from the N. side of the harbour, and in picturesqueness of site it is unexcelled by any city on the American continent. The three chief streets, of which WATER STREET is the most important, run parallel with the harbour. On the S. side of the harbour the hill springs so abruptly from the water's edge as to leave room only for a few warehouses and oil-factories. The attractive shops and houses of Water Street are of brick or stone, but in other parts of the city most of the buildings are of wood, presenting a very dingy and unattractive aspect. The population of St. John's in 1901 was 29,594 or nearly one-seventh of the entire population of the island, and it is now estimated as at least 35,000.

St. John's, founded soon after the discovery of the island, "gradually grew from a few fishermen's huts, clustering round the harbour, to a town stretching up the slope to the N. and along its crest. By 1836 its population was 15,000. In 1816 a great fire destroyed about two-thirds of the city, which was rebuilt on a much improved plan. On July 8th, 1892, St. John's was visited by another terrible conflagration, which swept away fully half the city, including the Church of England Cathedral, St. Andrew's Presbyterian Church, and the massive warehouses of Water St. About 11,000 persons were left homeless, and property to the value of \$12-18,000,000 was destroyed. This terrible calamity awoke a lively sympathy in other lands, and contributions poured in from Canada, England, and the United States. The people of St. John's set themselves with great energy to the task of re-erecting their burned city, and nearly all traces of the fire have disappeared. The streets have been widened, and the new buildings are much superior to the old. An efficient fire-department has been created to lessen the danger of a repetition of the catastrophe.

The chief business interests of St. John's are, of course, its fisheries and its whale and seal oil refineries, but of recent years it has made fair progress in manufactures, and it now contains iron-foundries, machine-shops, shoe, furniture, tobacco, and soap factories, breweries, tanneries, and a large and well-equipped rope-walk. — The strawberries grown near St. John's have an exceptionally fine flavour.

The most conspicuous building in St. John's is the **Roman Catholic Cathedral** (*St. John the Baptist*), which occupies a commanding site on the summit of the hill on which the city is built. It is in the form of a Latin cross, 237 ft. long and 180 ft. wide across the transepts, with two towers, 138 ft. in height. It is richly ornamented with statuary and paintings and presents an impressive

appearance. Adjacent to it are the *Bishop's Palace*, *St. Bonaventure College*, and a *Convent*, the whole group of buildings having cost about \$500,000. — The *Church of England Cathedral*, about halfway up the slope, is one of the finest ecclesiastical edifices in British America. It was designed by *Sir Gilbert Scott* in an Early English style, and is also dedicated to St. John the Baptist. Unfortunately it was greatly injured in the great fire of 1892, but has been restored.

On the *MILITARY ROAD*, running along the crest of the ridge, stands the *Colonial Building* or *House of Parliament*, containing chambers for the two branches of the Legislature. It is 110 ft. long and 85 ft. wide, and was built in 1847 at a cost of 100,000*l*. Its Ionic portico is borne by six massive columns, 30 ft. high. — To the E. of it is *Government House*, a plain, substantial, and comfortable residence, erected by the Imperial Government in 1828, at a cost of 30,000*l*. It is surrounded by well-kept grounds.

A fine *Court House*, of native stone, was opened in 1904 in Water St. (sec p. 110). — The *Post Office*, near the middle of Water St., is a very creditable building, completed in 1887. The upper portion is devoted to the purposes of a *Public Museum*.

The museum, which is well worthy of a visit, contains interesting relics of the *Beothicks*, the extinct aboriginal inhabitants of Newfoundland (comp p. 105); stuffed specimens of the caribou, bears, seals, birds, and fishes of the island; and a collection illustrative of its timber, mineral wealth, and geological formation.

At the E. end of Water St. stands the *Custom House*, which has been rebuilt since the fire of 1892.

The *Penitentiary*, a solid granite building, and the *Hospital* are on the outskirts of the city.

The large *Fish Stores*, in Water St., and the *Oil Factories*, on the S. side of the harbour, will well repay an examination.

The *Dry Dock*, at the head of the harbour, built, of wood, in 1884, at a cost of \$550,000, is 600 ft. long and 130 ft. wide, with a depth of 25 ft on its sill at low water. It is thus able to accommodate all but the very largest ocean steamers afloat.

Walks and Drives in the Neighbourhood of St. John's.

1. *SIGNAL HILL*. The top of **Signal Hill* (508 ft.), overlooking the Narrows (comp. p. 109), is reached in a walk of 1/2 hr., or by a carriage drive. At the height of 350 ft two small and deep lakes are passed. At the summit is the *Cabot Tower*, erected as a monument to John Cabot, the discoverer of the island (1497), and used for signalling to ships at sea. The foundation-stone was laid in 1897 in commemoration of Queen Victoria's Diamond Jubilee. The custodian will point out and describe the **View* from the top of the tower, which on a clear day is very fine. On the one side is the broad Atlantic. Looking to the N we see *Sugar Loaf*, *Red Head* (700 ft.), *Logie Bay*, *Torbay Head*, and the serrated range of hills on the S side of *Conception Bay*. The dark perpendicular sea-wall, with numerous indentations, runs up to *Cape St. Francis*. A fine sweep of country, dotted with numerous glittering lakelets and farm-houses and fringed with sombre groves of fir, stretches away to the N. W. The great chasm which forms the entrance to the harbour is seen below, guarded by precipitous

rock-masses. The remains of the batteries which once commanded the narrow entrance are visible on their rocky platforms. *Fort Amherst* and *Cape Spear Lighthouses* and *Fresh Water Bay*, with its fishermen's cottages, are seen to the S. A bird's-eye-view is presented of the harbour, with the whole city lying along the N. slope and crowned by the Roman Catholic cathedral. A lower peak called *Gallows Hill* stands out prominently. Here in the olden time criminals were executed in sight of the whole city — In 1762 Signal Hill was the scene of a brief but bloody struggle. For the third time the French had then got possession of St John's. Lord Colville was sent from Halifax with a squadron to drive them out. Colonel Amherst landed a force from the fleet at Torbay and marched overland to St. John's. Up the rugged heights from Quidi Vidi (see below) the English soldiers charged to capture Signal Hill, the key of the position. The French fought desperately, and having a great advantage from their position succeeded several times in repulsing their foes. At length a company of Highlanders with fixed bayonets dashed up the heights and swept all before them. Signal Hill being won, the French saw that all was lost, and their fleet crept out of the harbour in a fog and escaped. St John's never again fell into the hands of the French — The red sandstone which caps the hill belongs to the Huronian system of rocks, corresponding to the English Cambrian, which is developed all over the peninsula of Avalon. The hill itself is strewn with large boulders holding jasper and other water-worn pebbles, showing that they once formed the margin of an old Silurian sea and that by foldings and various earth-movements the sea-bottom has become a hill 520 feet above the level of the water. Here, too, are seen strations on the rock-surfaces showing that at a later period they were under glacier action. Geologists tell us that the whole island was once in the same condition in which Greenland now is — under a great ice-cap many hundreds of feet in thickness.

2. QUIDI VIDI. Close to St. John's lies Quidi Vidi Lake, $\frac{1}{2}$ M. in length, on which an annual regatta is held. The village of 'Quidi Vidi' is a typical fishing-village, where can be seen in perfection the stages projecting over the water of the little harbour, at which the fishermen land their fish, and the 'flakes' on which the cod are dried. During the fishing-season the visitor should time his arrival at the village for about 5 p.m., when the boat-loads of fish come in and the whole process of 'splitting', 'heading', and 'salting' can be seen. The small harbour is connected with the ocean by a narrow gut, only deep enough for fishing-boats. All around rise steep red cliffs in fantastic shapes. These, with the fishing-boats, stages, and flakes, make a strikingly characteristic picture. Artists find this the most attractive spot about the city. A little river flowing through the lake forms a pretty cascade as it tumbles over the rocks into the harbour. Visitors will enjoy a chat with the sturdy fishermen and their wives. Their insular peculiarities, linguistic oddities, and quaint views of things form an interesting study.

3 LOGIE BAY AND TORBAY. The road runs to the N. to (2 M.) *Virginia Water*, a pretty little lake embosomed in woods, and (4 M.) *Logie Bay*, with its striking coast scenery. *Outer* and *Middle Coves*, 2 M. farther on, are scarcely less remarkable. The thriving village of Torbay (1495 inhab.), 8 M. from St. John's, is one of the most picturesque spots on the coast, with a handsome Roman Catholic church, a convent, excellent school-houses, and a large public hall. This N. coast is characterized by the massive grandeur of its perpendicular cliffs, often sculptured into forms of stern beauty.

4. PORTUGAL COVE, 9 M. The road winds towards the N., along the shore of *Windsor Lake*, which supplies the city with water, and then through a little valley of rare beauty. At the end of the valley the bright waters of 'Conception Bay' (p. 119) come into view. On the S. shore of the bay lies the fishing-village of 'Portugal Cove' (1000 inhab.), perched amid the clefts of the rocks, a little waterfall tumbling over the cliffs into the sea. Cortereal discovered this bay in 1501 and named the roadstead after his country. The return to St. John's may be made via *St. Philip's (Broad Cove)* and the *Thorburn Road* (a charming drive). — Good trout-fishing may be obtained in ponds along all of the above routes.

b. From St. John's to Renew's. Cape Race.

64 M. A MAIL WAGON plies twice a week from St John's to *Renews* (see below) in 24 hrs (fare \$4), but visitors will find it much more comfortable to hire a carriage (fare about \$4 a day). The road is good and the views are often superb. The hotel-accommodation is, however, very primitive, and it is advisable to start with a well-filled luncheon-basket. The '*Barrens*' along this route are famous for their 'partridge' (willow-grouse) shooting, the season for which begins on Oct 1st.

The first part of the road is excellent and affords many beautiful views. 4 M. *Blackhead*, a village near *Cape Spear*, the easternmost point of N. America (comp. p. 103).

9 M. *Petty Harbour*, a charming village with (1901) 1771 inhab., situated at the mouth of a deep ravine through which flows a clear stream into the snug little harbour, fringed with fish-flakes and shut in by towering precipices. The electric power-house for lighting St John's and running its street-railway is stationed here.

About 3½ M. to the S. of Petty Harbour is '*The Spout*' — a funnel-shaped opening from above into a cavern which the sea has scooped out. In stormy weather, the sea, rushing into the cavern, hurls the spray and foam aloft through the opening, presenting a curious sight, visible at times for miles around.

Beyond Petty Harbour the road runs along the so-called '*Straight Shore of Avalon*' to (20 M.) *Bay of Bulls*, *Mobile* (24 M.), and (39 M.) *Cape Broyle*.

At (44 M.) *Ferryland*, a little town with (1901) 535 inhab., *Sir George Calvert*, afterwards Lord Baltimore, built a fort and a fine mansion in which he resided for two years with his family. Here, too, *Sir David Kirke* took up his residence in 1638, armed with the powers of a Count Palatine over the whole island.

51 M. *Fermeuse*, a village of 560 inhab., with its deep and safe harbour; 54 M. *Renews* (580 inhab.).

Cape Race, the S.E. point of the island, where many a gallant ship has met her doom, lies about 10 M. to the S. of *Renews*, from which it may be reached by road, boat, or steamer (comp. p. 114). Round its grim rocks swift conflicting currents circle; dark fogs brood here in summer for weeks together, so that the navigator has to shape his course mainly by the soundings. The dangers to navigation have been greatly lessened by the erection of a powerful fog-whistle on the Cape, and it is also a Marconi Wireless Station. Its lighthouse is 180 ft. above the sea-level and can be seen at a distance of 20 M.

About 50 M. to the E. of Cape Race are the **Great Banks** of Newfoundland, famous for their cod-fisheries. They are about 600 M. long and 200 M. wide, while the depth of water upon them ranges from 10 to 160 fathoms, with an average of 40 fathoms. Marine life of all kinds is abundant on the Banks, and cod and other fish resort to them in immense numbers. The vessels frequenting the Great Banks are known as 'bankers' and are larger and better fitted out than those of the coast-fisheries. The fishermen on the Banks, who, it is estimated, number 100,000, are of various nations and ply their hard labours shrouded in dense fogs and often in dangerous proximity to icebergs. A graphic idea of life on the Banks is given by *Mr. Rudyard Kipling* in his '*Captains Courageous*' (1897).

c. From St. John's to Bonne Bay by Sea.

651 M MAIL STEAMER 'PROSPERO' of the Bowring Brothers Coastal Mail Service every alternate Wed., reaching *Bonne Bay* in 5-6 days (fares \$15, \$8½, including stateroom and meals). The round trip takes about 10 days, and those who prefer may land at one of the 24 intermediate ports and spend a few days in fishing, sketching, or photographing.

The steamer makes its first call at (33 M.) *Ferryland* (p. 113), then rounds *Cape Race* (p. 113) and enters the fine harbour of (75 M.) *Trepassey* (800 inhab.), the landing-place for *Cape Race*. Beyond *Cape Pine* and *St. Shott's*, the scene of many shipwrecks, we ascend *St. Mary's Bay*, 25 M. wide and 35 M. deep, the first of the great bays which indent this coast. The village of *St. Mary's*, on its E. shore, with 500 inhab., is largely engaged in fishing and has a farming district around it.

Leaving *St. Mary's Bay*, we steer round *Cape St. Mary* and enter **Placentia Bay* (comp. p. 121), the largest bay of Newfoundland, with a length of 90 M. and a width (at its mouth) of 55 M. It contains several clusters of islands, one of which, *Great Merasheen*, is 21 M. long. The scenery of the bay is very fine. The steamer calls at (140 M.) *Placentia* (see p. 120), *Burin* (190 M.; *Capt. Holbers; Bennett Hotel*), *Great St. Lawrence* (800 inhab.; Sea View), and *Lamaline* (650 inhab.; Miss Pittan's). *Burin*, with (1901) 2719 inhab., is a busy and prosperous place, with a land-locked harbour, extensive fisheries, and a trade with *St. Pierre* (p. 124).

We next round the end of the peninsula of *Burin*, between *Placentia Bay* and *Fortune Bay*. To the left, as we approach the entrance of the latter, lie the French islands of *St. Pierre* and *Miquelon* (see R. 27). — *Fortune Bay*, 65 M. long and 35 M. wide, is noted for its extensive herring-fishery and is much frequented by American fishing-vessels. It was the centre of the bait-carrying traffic with *St. Pierre*. The ports called at within the bay are (260 M.) *Fortune* (950 inhab.), *Grand Bank* (1427 inhab.; Mrs. Foote's), *Great Jervois*, *Belleoram*, *St. Jacques*, and (283 M.) *Harbour Breton* (800 inhab.; Mrs. Macdonald's).

A little farther to the W. the steamer enters **Hermitage Cove* and **Baie d'Espoir* (corrupted into *Bay Despair*), the scenery of which is pronounced by many travellers the finest in the island.

From this point to *Cape Ray* extends a straight line of coast, 150 M. in length, indented by numerous small inlets and fringed with islands. Among the latter are the *Penguin Islands* (seen to the left) and the *Burgeo Islands*, on the largest of which *Capt. Cook* observed an eclipse of the sun in 1765. — 370 M. *Burgeo*, a village with (1901) 946 inhab., on one of the *Burgeo Islands*, is one of the most important places on the S. coast.

In few places can be seen more romantic villages than *Burin*, *Harbour Breton*, *Burgeo*, and *Rose Blanche* (p. 115). The effect of the pond-like harbours, surrounded by rugged hills, is enhanced by the haphazard way in which the cottages are dotted down among the rocks, wherever a foothold can be obtained. The whole coast is a paradise for artists.

405 M. *La Poile* (50 inhab.), the next point stopped at, lies at the head of one of the chief inlets of this coast. — 419 M. *Rose Blanche* is a highly picturesque little village on another small bay.

446 M. *Port-aux-Basques* (*Sea View Hotel; U. S. Agent*), with (1901) 1052 inhab. (including *Channel*), has a splendid harbour, open all the year round, and is a place of considerable importance as the terminus of the transinsular railway (see p. 119).

Rounding *Cape Ray*, the S.W. point of Newfoundland (p. 103), the steamer now turns to the N. and passes along what is popularly known as the *French Shore* (p. 107). Opposite Cape Ray, on the Cape Breton shore, is *Cape North*, the two capes guarding the entrance of the Gulf of St. Lawrence. From Cape Ray to *Cape Anguille* the coast is singularly rugged and inhospitable in appearance. The *Great* and *Little Codroy Rivers* enter the sea between these two points after flowing through a fertile valley 40 M. in length. The coast is backed here by the *Long Range* (p. 103), extending with interruptions nearly to the N. extremity of the island.

The fine **Bay St. George* (9100 inhab.; p. 123) is now entered. Its fertile shores are rich in minerals, coal-beds, and forests. One day it will be the garden of the colony. The steamer calls at (516 M.) *Sandy Point* and then rounds the peninsula of *Port-au-Port*, noted for its lead deposits. It is a paradise of geologists, who have chiselled from its rocks some of the most gigantic Cephalopoda in existence. Petroleum has been discovered here, as well as farther up the W. coast, and there are indications that it extends over a wide area, but as yet little boring has been done.

The (610 M.) **Bay of Islands* (1500 inhab., *British American Hotel, Victoria Place, \$1-1½; comp. p. 122*), with its magnificent scenery, now opens to the right. Its three arms run 20 M. inland, one of them receiving the **Humber River*, the second largest river in the island. As its name indicates, it has numerous islands.

The Humber is noted for its beautiful scenery, the marble beds along its banks, and its pine-forests, many of them now cut down.

651 M. **Bonne Bay* (1137 inhab.; *Mrs. Halfyard's House; comp. p. 119*), the terminus of our voyage, lies about 40 M. to the N. of the Bay of Islands, and its scenery is considered by some even finer. It has two long arms communicating with lakes at some distance from the coast by means of their respective rivers.

d. From St. John's to Griguet.

450 M. STEAMER 'PORTIA' of the *Bowling Brothers Coastal Mail Service*, every alternate Wed., reaching *Griguet*, on the extreme N.E. coast of Newfoundland, near Labrador, on the fifth day (fare \$10 50) This trip may be recommended to those who are fond of the sea and not afraid of a little rough weather, as the scenery at many points is sublime, and the monotony of the voyage is broken by many stoppages at interesting places.

After clearing *St. John's Narrows* (p. 109), the steamer passes *Torbay Head* (p. 111); *Cape St. Francis*, with its restless waves

breaking upon the '*Brandies*', as the outlying rocks are called; the mouth of *Conception Bay* (p. 119); the grim cliffs of *Baccalieu Island*, the resort of myriads of sea-fowl; and *Grates Point*. It then enters the great ***Bay of Trinity** (comp. p. 120), 70 M. in length. Touching at (47 M.) *Old Perlican*, it crosses to (68 M.) *Trinity* (1459 inhab.; Royal Oaks, Sea View, \$1), which possesses one of the finest harbours in the world and a whaling-industry.

Round the shores of Trinity Bay about 21,000 people are clustered, nearly all of them engaged in the fisheries. Many of them spend the summer in Labrador. The first Atlantic cable (1858) was landed at *Bay of Bulls Arm* at the head of this bay (see p. 107), and the existing cables emerge from the ocean at *Heart's Content* (p. 120), on its E shore, after traversing the great submarine plain of 1500 M. between Newfoundland and the coast of Ireland. — *Dildo Island* formerly possessed a Government Hatchery for the artificial propagation of cod.

The next call of the steamer is made at (87 M.) *Catalina* (1835 inhab.), a harbour of refuge at the N entrance of Trinity Bay. — We next reach *Bonavista Bay* (comp. p. 121), having around its shores a population of 20,500. Much of the land is under culture. — 107 M. **Bonavista**, its principal town (3696 inhab.), is a thriving place.

Most authorities hold that Bonavista was Cabot's '*Prima Vista*' of 1497 (comp. p. 105), though there is some evidence in favour of Cape North, on Cape Breton Island, as his real land-fall.

116 M. *King's Cove* (600 inhab.). — Beyond (148 M.) *Greenspond* (1353 inhab.), situated on an island with fine fishing-grounds around it, the steamer's course is shaped for (214 M.) *Fogo* (1118 inhab.), a harbour on an island of the same name, in **Notre Dame Bay** (comp. p. 121). The prosperous town of (232 M.) *Twillingate* ('*Toulinguet*'; 3542 inhab.), also on an island in Notre Dame Bay, is next reached. — 249 M. *Exploits* (500 inhab.), near the mouth of the *Exploits River*, which is famous for its salmon (p. 121). — 260 M. *Pilley's Island* is noted for its iron-pyrites mine, with ore of fine quality. — We are now in the famous copper-mining region, and extensive mining-operations are carried on at (293 M.) *Little Bay*, (309 M.) *Bett's Cove*, and (317 M.) *Tilt Cove* (1370 inhab.).

Proceeding on her N. route, the steamer now approaches an important landmark: **Cape St. John**, the N. headland of Notre Dame Bay and the N.E. boundary of the French Shore. Here we glide along a vast wall of rock, 400-500 ft. high and 6 M. long, the summits presenting every imaginable shape into which rocks can be torn or sculptured. The points touched at between Cape St. John and the N. end of the island are (349 M.) *Coachman's Cove*, (399 M.) *Conche*, and (435 M.) *St. Anthony*. The last, with its fine harbour, contains a hospital and orphanage of the Royal National Mission to Deep Sea Fishermen, a fox-farm, and some collections of local interest.

450 M. **Grignat**, the terminus of the voyage.

e. From St. John's to Battle Harbour and the Coast of Labrador.

The STEAMER 'VIRGINIA LAKE' of the Reid Newfoundland Co. runs fortnightly (in summer) from St. John's to (495 M.) *Battle Harbour* and various points on the Labrador Coast, going on some of her trips as far as *Nain*, 570 M. beyond *Battle Harbour*.

The fare is at the rate of \$2.25 per day. A fortnight is required for the trip to and from *Nain* (from St. John's), and the total cost is \$33, including stateroom and meals. The fine scenery and the invigorating atmosphere make this trip highly enjoyable to those who do not object to rough it a little. Round trip, see R. 26f.

From St. John's to *Griguet*, see R. 26d. On most of her trips between St. John's and *Battle Harbour* the 'Virginia Lake' calls only at *Harbour Grace* (p. 120), *Catalina* (p. 116), *King's Cove* (p. 116), *Twillingate* (p. 116), and *Tilt Cove* (p. 116).

After leaving *Tilt Cove* and rounding *Cape St. John* (p. 116), to the N. of *Notre Dame Bay* (p. 116), the steamer sails due N. until, 10 M. beyond *Griguet* (p. 116), it passes *Cape Bauld*, the N. extremity of Newfoundland — a dreary, desolate scene. Here, at times, great processions of stately icebergs may be seen moving to the S. through the *Straits of Belle Isle* (p. 3).

We now steer across the E. entrance of the straits, passing *Belle Isle* (p. 3), a barren and desolate little island, 9 M. long and 3 M. broad.

Early mariners called it the '*Isle of Demons*', imagining that they heard here 'a great clamour of men's voices, confused and inarticulate, such as you hear from a crowd at a fair or market-place'. The grinding of the ice-floes and the crash of the lofty bergs during a gale would be quite sufficient to give rise to these superstitious fancies.

Soon after passing *Belle Isle* the steamer reaches (495 M.) *Battle Harbour* (ca. 100 inhab.), a sheltered roadstead on the coast of Labrador (p. 3), between *Battle Island* and *Great Caribou Island*. It is a great fishing-centre, and during the fishing-season it is crowded with boats and presents a very lively scene. The Deep Sea Mission (see p. 116) has a settlement and hospital here.

The principal ports of call in Labrador beyond *Battle Harbour* are *Spear Harbour*, *Francis Harbour*, *Square Island*, *Dead Island*, *Venison Island*, *Bolster's Rock*, *Punch Bowl*, *Sandy Islands*, *Bateau*, *Domino*, *Indian Tickle*†, *Grady*, *Long Island*, *Cartwright*, *Pack's Harbour* (a Hudson Bay Co.'s post), *Indian Harbour*, *Smoky Tickle*, *Emily Harbour*, *Rigolet* (Hudson Bay Co.), *Holton*, *Cape Harrison*, *Long Tickle*, *Maggovick Mission Station*, *Turnavick*, *Hopedale*, and *Nain* (about 300 inhab.), the last two Moravian mission-stations. The missionaries stationed here are Germans, but most of them speak English. They willingly receive and entertain strangers. A fortnight may be agreeably spent at *Nain* or *Hopedale*, awaiting the return of the steamer. An opportunity is thus afforded of seeing the Christianized Eskimo who live around these stations.

In the fishing-season there are on the Labrador coast some 20,000 persons, many of them women and children, living in rude temporary huts on shore or on board the fishing-crafts, exposed to great hardships and

† *Tickle* is a local name in Labrador for a narrow channel.

perils. Many cases of sickness and accident occur, and these were at one time very inadequately aided by the doctor of the mail-steamer. The attention of the *Mission to Deep Sea Fishermen* in England having been called to the condition of the Labrador fishermen, their mission-ship '*Albert*' was sent there in 1892 in charge of Dr Grenfell. She returned in 1893, and as a result of the mission two excellent hospitals have been established, at Battle Harbour and Indian Harbour. A doctor and trained nurse are placed in charge of each. In addition Dr. Grenfell cruises along the coast during the fishing-season on the steam-yacht '*Strathcona*' (the gift of Sir Donald Smith, now Lord Strathcona), ministering to the sick, relieving the poor with donations of food and clothing, and carrying severe cases to the hospitals.

GRAND FALLS *Rigolet* (p. 117) is the only port of call for the steamer in *Hamilton Inlet*, which is 30 M. wide at its mouth, while its head is 150 M. from the sea. Here *Grand River*, which flows from the interior of Labrador, discharges its waters. The Grand Falls on this river were re-discovered in 1891, by Messrs. Bryant, Kenaston, Carey, and Crole (in two separate expeditions), and they were again visited by Mr. A. P. Low, at the head of an expedition of the Canadian Geological Survey, in 1894. The falls present a most magnificent spectacle. The river leaps from a rocky platform into a huge chasm. The roar is deafening and can be heard at a distance of 20 M. An immense column of mist rises to a great height, showing a beautiful rainbow. The height of the falls was found on a careful measurement to be 316 ft. The cañon into which the river plunges is 12 M. in length, and below the falls the cliffs along its banks are 400-500 ft. high. The banks gradually narrow above the falls, and where it makes its final plunge the river is not more than 200 ft. in width. On reaching a pool about 4 M. above the falls, the comparatively still river of the plateau rushes down a descent of 200 ft. in a strong rapid, and below the falls it descends 300 ft. more in similar fashion. Hence the total descent within a few miles is 800 ft., while that from the rapids above the falls to the sea is about 2000 ft. The first white man who saw these falls, in 1839, was a Scotsman named McLean, an official of the Hudson Bay Company. No one is known to have visited them in the interval, and the accounts of them were considered mythical. Anyone wishing to ascend *Hamilton Inlet* has occasional opportunity of doing so by means of a small steamer which carries the mails to the Hudson Bay post at *North West River* and to the lumber mills at *Kenamou River*. The trip up the river from these places to Grand Falls is at present only for the more venturesome, till a more practicable route is opened and present difficulties removed. But this can be a question of a short time only, and Grand Falls will doubtless become the chief objective point on the Labrador Coast. See Mr. Low's Report (1897).

Rigolet (p. 117) was the starting-point of the ill-fated expedition consisting of *Leonidas Hubbard*, assistant editor of '*Outing*', *A. Dillon Wallace*, a New York lawyer, and *George Elson*, an Indian guide, which started out in the summer of 1913 (inadequately equipped according to experienced hunters and trappers of the country) to explore the interior of Labrador. It resulted in the death of Mr. Hubbard from starvation on Oct. 18th. See '*The Lure of the Labrador Wild*', by Mr. Wallace, the survivor. Mrs. Hubbard, widow of the explorer, led another expedition to Labrador in 1903, in which she succeeded in her purpose of showing that her husband's scheme was entirely feasible.

f From St. John's to Battle Harbour via Bay of Islands.

87½ M. REID NEWFOUNDLAND COMPANY RAILWAY to (8½ M.) *Placentia* in 4½-5½ hrs. The STEAMER 'GLENCOE' of the same company leaves *Placentia* every Sat. for (306 M.) *Port-aux-Basques*, calling at intermediate ports (3½-4 days); return-steamer on Wed. From *Port-aux-Basques*, to (141 M.) *Bay of Islands*, R. N. Co. RAILWAY in 7 hrs. From *Bay of Islands* the STEAMER 'HOME' of the same company leaves every Wed. on arrival of trains from St. John's and *Port-aux-Basques*, for (342 M.) *Battle Harbour*, in 3½-4 days. The return-steamer is due at *Bay of Islands* on Tues. night. The round trip takes about 15 days, if continuous (through single fare, 1st class, \$21.80).

By this, the so-called *Western Route*, connection may be made at Battle Harbour with the steamer 'Virginia Lake', either for the coast of Labrador or returning down the E coast to St John's (see R 26e), thus completing the round of the island. The round trip in this case takes about 12 days, if continuous (return fare \$39 30). The vessels are strongly built and well officered, the food and accommodation are good.

From St. John's to (64½ M.) *Placentia Junction* and (84½ M.) *Placentia*, see R. 26 g.

From Placentia to (306 M.) *Port-aux-Basques* by steamer, see R. 26c.

From Port-aux-Basques to (144 M.) *Bay of Islands* by railway, see R. 26 g.

After leaving Bay of Islands (or more properly the Humber Mouth) the steamer calls at (4 M.) *Curling* (p. 122), which is the best place to embark. Sailing to the N., the first place of call is (40 M.) *Bonne Bay* (p. 115).

Beyond Bonne Bay the steamer still steers to the N. 120 M. *Port Saunders*, in *Ingornachioix Bay*, is of interest to sportsmen. Near it is *Hawke Bay*, with the large private cabin of Mr. Pratt of New York ('The First').

Above Ingornachioix Bay calls are made at (150 M.) *Bartlett's Harbour*, (168 M.) *Brig Bay*, (176 M.) *Current Island*, (211 M.) *Salmon River*, (214 M.) *Bonne Espérance*, (222 M.) *Middle Bay*, and (235 M.) *Flower Cove*, on the Newfoundland coast. The steamer now crosses the *Straits of Belle Isle* (pp. 3 and 117) to (244 M.) *Blanc Sablon*, on the mainland, at the boundary between Quebec and Labrador.

Sailing to the N.E. through the Straits of Belle Isle, with their succession of maritime pictures, the steamer touches at (263 M.) *Forteau*, (269 M.) *Lance au Loup*, (279 M.) *West St. Modeste*, (291 M.) *Red Bay*, (321 M.) *Château*, and (331 M.) *Chimney Tickle*, on the N. side of the straits. Rounding (336 M.) *Cape St. Charles* it finally enters (342 M.) *Battle Harbour* (comp. p. 117).

g From St. John's to Port-aux-Basques.

Harbour Grace. Placentia.

548 M. REID NEWFOUNDLAND COMPANY RAILWAY in 28 hrs. (fares \$ 14, \$ 8; return-fare \$ 24; sleeper \$ 3). — This railway, forming the grand trunk line of Newfoundland, was completed and opened for traffic in 1898. It opens up the most important farming, lumbering, and mining districts of the island, and forms the final link in the main travel-route between Newfoundland and the American Continent. Its W. terminus, *Port-aux-Basques*, is connected with the Canadian railway system at (90 M.) *North Sydney* (p. 68) by the steamer 'Bruce', which performs the passage across the Cabot Strait thrice weekly in 6 hrs. (fares \$ 3 5, \$ 2 5). This steamer is specially built to cope with ice, and has succeeded in keeping the communication open throughout the winter. By this route Halifax is 45 hrs., Montreal 68 hrs., Boston 72 hrs., and New York 77 hrs. from St. John's.

The railway-station is at the W. end of *St. John's* (p. 109). The train runs at first towards the W. and soon reaches the shore of **Conception Bay*, which it skirts towards the S.W. (*Views to the right). A remarkable deposit of brown hematite iron-ore has re-

cently been discovered on *Bell Isle* (6 M. long), in this bay, and is now being shipped at the rate of 15,000 tons daily to supply the *Dominion Iron & Steel Co* and the *Nova Scotia Steel & Coal Co.* at the Sydneys. — 15 M. *Topsail*, a pretty village with comfortable boarding-houses, is a favourite summer and bathing resort and has been somewhat ambitiously styled the 'Brighton of Newfoundland'. — 18 M. *Manuels*, with a fine beach, is also a popular holiday-resort. A deposit of talc has recently been discovered in the vicinity, an aerial tramway has been built, and the first shipment was made to the American market in 1904. — 22 M. *Kelligrews* is another favourite place of outing for the people of St. John's. 27 M. *Seal Cove*. — 33 M. *Holyrood*, at the head of the bay, presents some striking scenery, especially in the sea-arms.

Holyrood is about 15 M. from the *Salmonier River*, in which good salmon-fishing is sometimes obtained.

The line now runs inland. 39 M. *Avondale*. — 44 M. *Brigus Junction* is the starting-point of the branch-line to Harbour Grace and Carbonear (see below).

FROM BRIGUS JUNCTION TO CARBONEAR, 38 M., railway in $2\frac{1}{3}$ hrs. (from St. John's in $4\frac{1}{2}$ hrs.; through-fares \$2 45, \$1 70). The line runs towards the N. — 11 M. *Brigus* (Cabot Ho., \$1), a thriving little seaport with (1901) 1162 inhab.; $17\frac{1}{2}$ M. *Clark's Beach*; $21\frac{1}{2}$ M. *Bay Roberts*; 24 M. *Spaniard's Bay*; 26 $\frac{1}{2}$ M. *Tilton* (see below).

$31\frac{1}{2}$ M. *Harbour Grace* (*Gordon Lodge, Cochrane Ho.*, \$1 $\frac{1}{2}$), the second town of the island, with (1901) 5184 inhab., is a clean, well-built little place, finely situated on the W. shore of Conception Bay. It carries on a large trade. The handsome *Roman Catholic Cathedral*, destroyed by fire some years ago, has been rebuilt. — 33 M. *Carbonear* (3703 inhab.).

FROM CARBONEAR TO CLARENVILLE, 148 M. (fare \$3 80). The steamer 'Ethie' of the Reid Newfoundland Co. connects at Carbonear every Tues. and Sat. with trains from St. John's and runs to ports in Trinity Bay. The steamer first calls at (13 M.) *Western Bay* (1000 inhab.) and (25 M.) *Bay de Verde* in Conception Bay, and then crosses the mouth of Trinity Bay to (55 M.) *Catalina* (p. 117). Here it turns to the S. and steers along the W. coast of Trinity Bay to (76 M.) *Trinity* (see p. 116), *New Bonaventure* (86 M.), *British Harbour* (93 M.), and (103 M.) *Britannia Cove*, with noted slate-quarries. It then steers through *Smith Sound*, to the N. of *Random Island*. 130 M. *Fox Harbour*; 136 M. *Hickman's Harbour*. — 148 M. *Clarenville* lies on the railway (see p. 121), opposite the W. side of Random Island.

On its return-trip from Clarenville (Mon. & Frid.) the steamer crosses Trinity Bay to *Heart's Content* (1075 inhab.), which lies on the E. shore, and is now world-famous as the W. terminus of the Anglo-American Co.'s cables. The officials here are most courteous and attentive to strangers and ready to explain all the mysteries of telegraphy. — This place may also be reached by a pleasant drive (11-18 M.) from Harbour Grace or Carbonear (see above).

57 M. *Whitbourne Junction* (hotel), for another branch-line to Harbour Grace, passing (10 M.) *Broad Cove* (p. 112) and connecting with the branch described above at (22 M.) *Tilton*.

At (64 $\frac{1}{2}$ M.) *Placentia Junction* diverges the branch-line to (20 M.) *Placentia* (through-fares from St. John's \$2.50, \$2, \$1.70).

This line runs to the S.W. past (12 M.) *Ville Marie*.

Placentia (*Bradshaw's Inn*, \$1, unpretending, but clean and comfortable), a quaint little town with 1300 inhab., on the bay of its own name (comp. p. 114), was founded and fortified by the French in 1660 and held

by them till 1713 (comp. p. 103). It lies on a shingly beach and is surrounded by exquisite scenery, especially along the arms of the sea, one of which runs 10 M. inland. In July they abound in sea-trout of the finest quality. The remains of the *Oldest Protestant Church* (Ch. of England) in the island are here, but in a most dilapidated condition. It contains a handsome silver communion-service presented to it by William IV., who visited Placentia when a midshipman. On one of its old *Tombstones* is an inscription in the Basque language, the Basques having been among the earliest fishermen on the coast (comp. p. 105). — The old *Court House* is close to the church. Other objects of interest are *Castle Hill*, with remains of the French fortifications; *Point Verde* (3 M.); and *Lily White Pond* (5 M.), famous for its trout.

Placentia Bay. The steamer 'Argyle' of the Reid Newfoundland Co. plies on Placentia Bay, leaving Placentia every Mon. on the arrival of the train from St. John's, for all points on the inner bay, and every Wed., on the arrival of the train, for all points on the outer bay.

The steamer 'Prospero' leaves Placentia every Wed. (p. 114) and the 'Glencoe' every Sat. (p. 118) for *Port-aux-Basques* (p. 115).

Beyond Placentia Junction the train runs through a wild, rugged district, traversing the narrow isthmus that connects the peninsula of Avalon with the main body of the island. 82 M. *Tickle Harbour*; 90 M. *Rantem*; 92 M. *La Manche*; 101 M. *Arnold's Cove*; 105 M. *Come-by-Chance*, 118 M. *Northern Bight*, 133 M. *Clareville* (steamer to Heart's Content and Carbonear, see p. 120); 135 M. *Shoal Harbour*; 145 M. *Thorburn Lake*. — At (153 M.) *Port Blandford*, where good sea-bathing and salmon and trout fishing may be obtained, the scenery improves.

The steamer 'Dundee' of the Reid Newfoundland Co. connects at Port Blandford with trains from St. John's and Port-aux-Basques every Mon. and Frid. and makes a complete circuit of the beautiful *Bonavista Bay* (comp. p. 116), calling at 21 ports, and taking about 3 days for the trip.

166 M. *Terra Nova* (Stone's, \$1¹/₄), on a lake of the same name, is one of the best hunting-resorts in Newfoundland, while the *Terra Nova River* is noted for its salmon (touring parties must take their own outfits with them). 183 M. *Alexander Bay*. — At (191 M.) *Gambo* (Gambo Hotel), the centre of another good hunting-district, we cross the fine river of that name by a steel bridge. The river contains excellent trout, while *Lake Gambo* is famous for its land-locked salmon — 206 M. *Benton*. — At (233 M.) *Glenwood* the train crosses the *Gander River*. To the S. lies *Gander Lake*, a fine sheet of water 33 M. long, on which good boating may be had. It is surrounded by dense forests, in which much lumbering is done. — From (247 M.) *Notre Dame Junction* a branch-line runs to the N. to (9 M.) *Lewisporte* (350 inhab., Somerset Ho., Lewisporte Ho., primitive).

At Lewisporte the train connects with the steamer 'Clyde' of the Reid Newfoundland Co. for the trip round *Notre Dame Bay* (comp. p. 116). The steamer leaves every Mon. for the S. side, returning every Wed., and leaves every Frid. for the N. side, returning every Sunday. This is one of the most beautiful trips in Newfoundland. The steamer winds in and out among the hundreds of islands that fill the bay, affording a fine panorama of picturesque fishing-villages and majestic coastal scenery. There are numerous points of call.

256 M. *Exploits*, on the *Exploits River*, the longest in the island (200 M.; comp. p. 116). The line now follows the valley of this

river, which contains much useful timber and large tracts of good arable land. The scenery is attractive, and beautiful wild-flowers flank the railway. — 269 M. *Bishop's Falls*; 284 M. *Rushy Pond*; 296 M. *Badger Brook*. — From (312 M.) *Millertown Junction* a branch-railway runs to (14 M.) *Millertown*, with the mills of the *Harmsworth Pulp Co.*, belonging to the well-known London newspaper owners. — 317 M. *St. Patrick's Brook* is a famous hunting-resort. In this vicinity the caribou in migrating cross the railway, going S. in Sept. and N. in May. — 324 M. *West Brook*. The train now leaves the Exploits River Valley. — At (335 M.) *Gaff Topsail* (1700 ft.) we reach the highest point of the line, on the watershed between the Exploits and Grand Lake. The so-called 'Topsails' are three singular granitic eminences springing from the level plateau. Granite boulders strew the ground, and granite-quarries are worked here. — The train now follows *Kitty's Brook* and soon enters the spacious *Humber Valley*, which contains much fertile land and large deposits of marble. The scenery is also very fine. At places the river is lined by cliffs of marble and limestone, several hundred feet high. For the next 100 M. or so scarcely a house is seen from the train. Indeed this paucity of houses is characteristic of nearly the whole line, the explanation being that the settlements of Newfoundland are nearly all on the coast and that the railway has been built, not to meet the wants of a settled population, but to open up the interior of the island for industrial enterprise.

365 M. *Grand Lake Station*, a coal-mining point, lie son **Grand Lake*, a fine sheet of water, 56 M. long and 5-6 M. wide, with an island, 22 M. long, in its centre. There is a good sportsman's hotel here. Numerous cascades descend into the lake from the densely-wooded shores and from the island. Deer abound in the plateaux overlooking the lake and in the neighbouring *White Hill Plains*. — 375 M. *Deer Lake Station* (no house), where sportsmen leave the train for fishing and hunting on the upper Humber River, the entrance to which can be seen on the opposite side of the lake. The first pool sought is that below the (20 M.) *Grand Falls*. Leaving *Deer Lake Station*, the train runs along the banks of the **Lower Humber River*. For the next 14 M. it broadens almost into a lake, with foliage-laden banks, and then for an equal distance rushes through a deep defile, with scarred and treeless cliffs towering many hundred feet in grim majesty.

The Humber discharges its waters into the Gulf of St. Lawrence at (40½ M.) *Bay of Islands*, or, more properly, *Humber Mouth* (comp. p. 115), the former name belonging by rights to the entire district. Here the steamer 'Home' of the Reid Newfoundland Co. leaves every Wed., on the arrival of the train, for *Battle Harbour* (pp. 117, 119), connecting there with the steamer 'Virginia Lake' for the coast of Labrador or for the E. coast route to St. John's (R. 26e). — 408 M. *Curling* or *Birchy Cove* (Mrs. Petrie, \$ 1½) a

beautiful spot with a branch of the Bank of Montreal. A good hotel is much needed for summer-visitors.

Bay of Islands and Bonne Bay are destined to be the chief tourist resorts of the W. coast of Newfoundland on account of their beautiful scenery, which has been characterized as the finest in North America. The railway between the Humber Mouth and Port-aux-Basques also makes accessible more good salmon and trout fishing streams than can probably be found in the same distance anywhere else in the world.

A valuable deposit of slate has been found at Bay of Islands, and is now being shipped to England. There are similar deposits in Trinity Bay, Bonavista Bay, and Placentia Bay.

427 M. *Howards*, in a mining-district. — 430 M. *Spruce Brook* (*Log Cabin Hotel, \$ 2½, with tennis courts, canoeing, boating, fishing, etc.). The charming rustic hotel here is much frequented by tourists with ladies in their party. It is situated near *St. George's Lake*, a beautiful sheet of water about 8 M. long by 2-3 M. wide, surrounded by high and timber-covered hills. The next station (439 M.) *Harry's Brook*, also has excellent salmon-fishing. — 453 M. *Stephenville* is the point of departure by water for *Sandy Point*, the centre of the great herring-fishery of *Bay St. George* (comp. p. 115). This fine bay, a favourite summer-resort, is adjoined by deposits of coal, lead, iron, gypsum, and asbestos. — The railway crosses the head of the bay to (460 M.) *St. George's* (**St. George's Hotel*, \$ 2, resembling the *Spruce Brook Log Cabin*; *Nandini's*, \$ 1, for sportsmen), with bathing, boating, fishing, and golfing. Three rivers unite here and empty into *Bay St. George*: *Harry's Brook*, *Bottom Brook*, and *Southwest Brook*, all excellent salmon-streams. The bay may still be seen from the railway, which now in places passes over a flat and treeless waste of sand-dunes. — At (474 M.) *Fishel's* the train enters a section known as 'The Rivers' on account of the many streams that traverse it. 481 M. *Robinson's*. — 486 M. *Crabbs* (farm-house). The *Crabbs River* has splendid salmon and trout fishing. There are good roads and fine Highland scenery in the vicinity. — 504 M. *North Branch* and (513 M.) *South Branch* are the stations for the *Grand River Codroy*, a fine stream about 35 M. long, with good salmon-fishing in the early season (June 15th-July 15th). The train now runs behind the *Anguille Hills*. 523 M. *Doyle's*, a favourite resort for sportsmen. At (528 M.) *Little River* (Tompkins, \$ 1¼) excellent salmon and trout fishing may be had from June 15th till the end of the season on the *Little Codroy*, a favourite river with American anglers. We next traverse several miles of rocky barrens.

548 M. *Port-aux-Basques*, see p. 115. Steamer to North Sydney, see p. 119. Steamers to Placentia, see R. 26c and R. 26f; to Bonne Bay, see R. 26c.

27. St. Pierre and Miquelon.

A steamer of the *Société St. Pierreaise de Navigation à Vapeur* and the 'St. Pierre Miquelon' of the *Plant Line* ply fortnightly from Halifax to the French islands of *St. Pierre* and *Miquelon*, taking about 2 days to the voyage (fare \$12). The steamers run to Sydney through the *Bras d'Or Lakes* by the route described at pp 63-67, except when prevented by ice, and cross thence to *St. Pierre*, a distance of about 100 M.

The islands of *St. Pierre* and *Miquelon*, ceded by Great Britain to France as a shelter for her fishermen by the Treaty of Paris (1763) and now the only relics of the once great French empire in America, are situated at the mouth of *Fortune Bay* (p. 114), about 10 M. from the peninsula of *Burin* (p. 114), the nearest part of Newfoundland, and about equidistant (135 M.) from *Cape Race* (p. 113) and *Cape Ray* (p. 115). *Great Miquelon Island*, about 12 M. long, is connected by a sandy isthmus with *Little Miquelon* or *Langlade Island*, which is about the same size. The island of *St. Pierre* is much smaller, being only about 4 M. in diameter, but it is much the more important of the two, containing the capital and the only good harbour. The two islands, which contained in 1902 a resident population of 6482, of whom about 5900 were in *St. Pierre*, were of immense importance to France as the station from which she carried on her fisheries on the Banks of Newfoundland. The fisheries along the so-called *French Shore* (p. 108) have, however, dwindled till they are now visited only by 8-10 French vessels in the course of the year, while, since the bait-selling regulations (see p. 108), the Banks fishery has also been practically ruined for the present. The export of cod from the islands in 1905 amounted to 13,027 tons (metric), the number of fishermen employed fell from 3178 in 1903 to 1900 in 1906. The fisheries are supported by large bounties. Vegetation on the islands is of the poorest description, only a few garden vegetables being grown. Dense fogs prevail in summer and often hang over the islands for days together.

The town of *St. Pierre* (*Hôtel Joinville*, \$2; *Pension Coste*, \$1½, well spoken of; British Consul, *Mr. Arthur W. W. Woodhouse*), which lies on the E. side of the island, is the seat of the Governor of the Islands and is the landing-place of two transatlantic cables. During the fishing-season it presents a very busy aspect, its roadstead often containing scores of fishing-vessels, while hundreds of fishermen are temporarily added to its small population. The chief buildings are the *Governor's House*, the *Court of Justice*, the large *Church* and *Convent*, the *Hospital*, and the *Schools*. Altogether, the little town is unique in character, and the visitor will find much to interest him in it and in the customs and manners of the fishermen who frequent it. He may either return by the same steamer after 3 days or wait 17 days for the next one.

V. QUEBEC.

Route	Page
28. Montreal	125
Environns of Montreal	138
29. From Montreal to Quebec	139
a. Viâ the Canadian Pacific Railway (N. Shore of the St. Lawrence)	139
Shawenegan Falls	140
b. Viâ the Intercolonial Railway (S. Shore of the St. Lawrence)	140
c. Viâ the Grand Trunk Railway (S. Shore of the St. Lawrence)	141
d. Viâ the Canadian Northern Quebec Railway . .	142
From Joliette to Hawkesbury	142
e. Viâ the St. Lawrence	142
Abenakis Springs	143
From Sorel up the Richelieu River to Chambly .	143
30. Quebec	145
31. Excursions from Quebec	157
a. Lévis	157
b. Isle of Orleans	157
c. Falls of Montmorency and Ste. Anne de Beaupré	158
d. Lorette. Charlesbourg. Lake Beauport. Lake St. Charles	160
32. From Quebec to Lake St John and Chicoutimi . .	161
Château Bigot	162
Falls of Lorette	162
Laurentides National Park	163
Grand Discharge Ouatichouan Falls. Pointe Bleue	165
From the Island House to Chicoutimi by River .	165
33. From Quebec to Chicoutimi. The Saguenay . . .	166
Excursions from Murray Bay	168
Cacouna	168

28. Montreal.

Railway Stations. *Bonaventure Station* (Pl. D, 6, 7), St. James St., for trains of the Grand Trunk Railway, Intercolonial Railway, Central Vermont R.R., Delaware & Hudson R.R., etc.: *Windsor Street Station* (Pl. C, 6), Windsor St., the chief station of the Canadian Pacific Railway, also used by the Adirondack line of the New York Central R. R. (p. 16); *Viger Square Station* (Pl. E, F, 4), on the E. side of the city, for the Quebec, Ottawa, and N. local trains of the C. P. R. — *Steamers*, see p. 126. — *Cabs*, see p. 126. The omnibuses of the chief hotels meet the trains and steamers (fare 25 c.).

Hotels. **WINDSOR* (Pl a; C, 6), excellently situated in Dominion Square, with 800 beds, \$3½-5 (extension in progress, with rooms on the European plan), **PLACE VIGER HOTEL* (Pl f, E, 3), Viger Sq., owned by the C. P. R., \$3-5, R. from \$1½; **ST LAWRENCE HALL* (Pl b; D, E, 5),

St James St., recently enlarged and improved, good cuisine, \$2½-4, R. from \$1; CORONA (Pl. d, B, 7), 463 Guy St, adjoining His Majesty's Theatre, R. from \$1, with bath from \$2, well spoken of, QUEEN'S HOTEL (Pl. c; D, 6), cor of Windsor St. and St. James St, opposite the Bonaventure Station, commercial, \$2½-3½; CARSLAKE HOTEL, St. James St., opp. the Bonaventure Station, commercial, R. from \$1; ST. JAMES HOTEL (Pl. h, D, 6), opp. the Bonaventure Station, \$2-3, R. from \$1, commercial; ALBION (Pl. i; E, 6), 141 McGill St., \$2-2½. — Boarding Houses (\$6-10 a week) — Mrs Richardson, 28 McGill College Ave; *Llewelyn Hotel*, 17 McGill College Ave.; F. W. C. A., opposite the Windsor Hotel (for ladies, from \$1¼); Mrs. Benoit, 18½ Osborne St., \$1; Mrs. Squire, Mrs. Evans, 840 & 897 Dorchester St. — Lodgings are also easily procured.

Restaurants. *Bodega*, 1748 Notre Dame St (good wines); *Freeman*, 151 St. James St.; *C. M. Alexander*, 219 St James St.; *John F. Alexander*, 2358 St Catherine St.; *Oxford Café*, 36 University St.; *Dames*, 133 St. Peter St.; *Grill Rooms of St. Lawrence and Windsor Hotels* (p. 125); *Corona Hotel*, see above; at *Morgan's*, the *John Murphy Co.*, and other departmental stores; at the railway-stations.

Electric Tramways traverse the city in various directions, and extend to Mount Royal (p. 136), to (½ hr.) Summerlea (Lachine; pp. 138, 230), and to various other points in the Island of Montreal. Fare 5c. (six tickets 25c), to the extra-mural points 10c., to Lachine 15c., to Bout de l'Isle 25c.

Cabs (good and cheap). With one horse, 1-2 pers. for ¼ hr. 25 c, ½ hr 40 c, 1 hr. 75 c., each hr. addit. 80 c.; 3-4 pers. 40 c, 60 c., \$1, 75 c. With two horses 1-2 pers., 50 c, 65 c, \$1; 3-4 pers., 65 c., 75 c, \$1.25. Trunk 10 c.; small articles free. Double fares from midnight to 4 a.m. The cabmen of the Montreal Hackmen's Union (identified by button with M. H. U.) may be recommended.

Observation Cars start from the Windsor Hotel daily in summer at 10 a.m. and 2 p.m., visiting the chief sights of the city and encircling Mt. Royal (2 hrs.; fare 50 c.).

Steamers. 1. STEAM FERRIES ply at frequent intervals to *St. Helen's Island* (p. 137), *St. Lambert* (pp. 14, 133), *Longueuil* (p. 133), and *Laprairie* (p. 138). — 2. RIVER STEAMERS, belonging to the Richelieu & Ontario Navigation Co. (228 St Paul St.), the Ottawa Co (161 Common St.), and other lines, ply regularly from Montreal up or down the St. Lawrence to Quebec (see R. 29e), *Three Rivers* (p. 139), the *Saguenay* (R. 33), *Beauharnois* (p. 122), *Cornwall* (p. 229), *Kingston* (R. 47), *Toronto* (p. 138), and other ports; up the Ottawa to *Carillon* (p. 135) and *Ottawa* (p. 176); to ports on the rivers Richelieu (p. 143) and Yamaska (p. 141), etc. — 3. LARGER STEAMERS run to *Charlottetown*, *Pictou*, and *St. John's* (Newfoundland), and to other ports in Gaspé, the Baie des Chaleurs, the Gulf of St. Lawrence, Prince Edward Island, and Cape Breton (Quebec Steamship Line, etc.). — 4. OCEAN STEAMERS run to *Liverpool* (Allan Line, Dominion Line, C. P. R. Atlantic S. S. Line, etc.; comp. R. 1a), to *Glasgow* (Allan Line; comp. R. 1c), to *London*, to *Bristol*, to *Hamburg*, to *Antwerp*, and to other transatlantic ports.

Amusements. His Majesty's Theatre (Pl. B, 7), Guy St., the chief theatre of Montreal, seats from 25 c. to \$1½; *Théâtre des Nouveautés* (Pl. D, 4), 1861 St. Catherine St. (well-acted modern French plays); *Academy of Music* (Pl. 2; C, 5), Victoria St.; *Théâtre Français* (Pl. D, 4), 1889 St. Catherine St.; *Theatre Royal* (Pl. D, 5), Coté St., 10-50c. — *Arena*, St. Catherine St., cor. of Wood Ave., for concerts, light opera, sports, etc.; *Victoria Hall*, Drummond St., for concerts; *Monument National* (Pl. D, 4), 218 St. Lawrence Boulevard, for concerts and entertainments; *Stanley Hall*, 96 Stanley St., behind the Windsor Hotel. — *Sohmer Park* (Pl. F, 3), in Notre Dame St., on the bank of the river, a sort of 'al fresco' music hall, with variety-entertainments (adm. 10c., menagerie 10c. extra); *Dominion Park* at Longue Pointe (p. 143), a similar resort (both reached by electric car, fare 5c.). — *Concerts* are given by the *Montreal Oratorio Society* and the *Philharmonic Society*. — *Crystal Skating Rink* (Pl. C, 7), Dorchester St.; *Prince Arthur Skating Rink* (Pl. B, 3), Duluth Ave.; *Stadium Skating Rink* (Pl. C, 2), 805 St. Hubert St. — *Tobogganing* is enjoyed in winter at the *Park Slide* (Pl. A, 6),

on the W. slope of Mt. Royal Park — *Lacrosse*, the Canadian national game, (comp. p. lviii), may be well seen at the grounds of the *Montreal Amateur Athletic Association* (Pl. B, 6) or of the *Shamrock Club* (matches usually on Sat. in summer and autumn). — *Caledonian Curling Rink*, Burnside Place, *Thistle Curling Rink*, Ste. Monique St. (Pl. C, D, 6); *Montreal Curling Club*, 56 St. Luke St. — The *Montreal Snow Shoe Club* ('*Tuque Bleue*') gives torch-light parades in winter from McGill College Gates to Outremont (picturesque blanket uniform). Other snowshoe clubs are *Le Montagnard* (the chief French snowshoe club), *St. George's* (with a good club-house on the mountain), *Argyle*, and *Holly* — *Yachting* and *Boating* are carried on on the St. Lawrence at *Longueuil* (p. 138), *Ste. Anne* (p. 185), *Lachine* (p. 280), etc.; and there are also clubs for *Cricket*, *Golf* (grounds at Lachine, St. Lambert, Dixie, Outremont, etc.), *Football*, *Hockey*, *Bicycling*, *Tennis*, etc. — The *Montreal Hunt* claims to be the best in America (meets thrice weekly in Sept.-Dec.; wild fox). The fine *Kennels* of the club are on the Côte St. Catherine Road, Notre Dame des Neiges. The *Canadian Hunt Club* has its headquarters at Slocum Lodge, opposite St. Lambert (p. 14). — *Horse Racing* is carried on, in summer and autumn, at the *Delormier Park* and the *Bel-Air Racecourse*, both reached by railway.

Exhibitions of Paintings are held in the *Art Gallery* (p. 134). Among the best private collections are those of *Lord Strathcona*, *Sir W. C. Van Horne*, *Mr. R. B. Angus*, *Mr. James Ross*, and *Sir George Drummond*.

Newspapers. The following are among the chief papers published at Montreal. English: *The Gazette*, founded in 1777 and published continuously since 1795, is the oldest still existing paper in Canada (Conservative; 2 c.); *The Herald* (Liberal; 1 c.); *The Star* (1 c.); *The Witness* (1 c.); *The True Witness* (Irish and Home Rule; 5 c.). French: *La Patrie* (Lib.; 1 c.); *Le Canada* (Lib.; 1 c.); *La Presse* (Con.; 1 c.); *L'Aurore* (French Prot. weekly; 2 c.). — Numerous weekly, monthly, and quarterly periodicals are also published in both languages

Clubs. *Mt. Royal* (Pl. B, 6), Sherbrooke St., cor. Stanley St.; *St. James* (Pl. 8; C, 5), 831 Dorchester St.; *St. Denis Club*, 88 St. Denis St.; *Canada Club*, in Board of Trade Building (p. 187); *Montreal Club*, Canadian Pacific Telegraph Building; *Club Canadien de Montreal*, 350 La Gauchetière St. — *Montreal Amateur Athletic Association*, 260 Peel St. (Pl. B, 6), with gymnasium, library, etc (strangers admitted for one week on introduction by a member); grounds, with cinder-track and club-house, on St. Catherine St. West (comp. above) — *National Amateur Athletic Association* (French), with grounds in Ontario St. East (sec. Léon Rolland, 6 St. Vincent St.). — *Forest & Stream Country Club*, on Lake St. Louis, at Dorval (p. 186).

Consuls. U. S. Consul-General, *Major Church Howe*, 260 St. James St.; French Consul-General, *Mr. Dallemagne*; German Consul, *Mr. Frankson*.

Fur Shops. *Henderson, Robertson*, St. James St. (Nos. 229 & 233); *Samuel*, St. Catherine St.; *Desjardins* (French), 1533 St. Catherine St. — At '*Our Handicrafts Shop*', belonging to the *Canadian Handicraft Guild*, may be purchased specimens of *Habitant*, *Doukhobor*, *Galician*, and *Indian* work.

Photographs of Canadian scenery, etc., may be obtained of *William Notman & Son*, Birks Building, Phillips Square, opposite the English Cathedral, or at the Windsor Hotel.

Baths. *Turkish Baths*, 140 Ste. Monique St. (Turkish bath \$1; plunge or swimming bath 25 c.); *Mt. Royal Sanatorium*, 45 Metcalfe St., opposite Windsor Hotel (Turkish, electric, and other baths), *Laurentian Baths*, 204-210 Craig St.; plunge baths at the *Y. M. C. A. Building* (p. 133), Dominion Sq.; *Swimming Baths* on St. Helen's Island

Post Office (Pl. E, 5), St. James St., open 7.30-7 (mails to Great Britain four times weekly, to the United States twice daily; comp. p. xxi). — **Telegraph Offices.** *Great Northwestern Telegraph Co.*, 6 St. Sacrament St.; *Canadian Pacific Railway Co.'s Telegraph*, 4 Hospital St., both with many branch-offices. — *Bell Telephone Co.*, 1760 Notre Dame St. — *Dominion Express Co.*, 187 St. James St.; *American Express Co.*, *National Express Co.*, and *Canadian Express Co.*, all at 94 McGill St. (G. T. R. Building).

Tourist Information Bureau (of the 'Montreal Business Men's League'), Leeming-Miles Building, St. Lawrence Boulevard, near Notre Dame St.

The Streets of Montreal are supposed to have both the English and French forms of their names at the corners (generally the French in the E. part of the town and the English in the W.) The streets running E. and W. are distinguished as 'West' or 'East' with reference to St. Lawrence Boulevard, where the numbering begins. [As this, however, is a very recent innovation, the old numbers of the houses are still partly in use.]

Principal Attractions. *Notre Dame Church; St. James's Cathedral; English Cathedral; *Mount Royal Park*, with *View; *Hôtel Dieu; Grey Nunnery; Château de Ramezay. Bonsecours Market; Art Gallery; Natural History Museum; Fraser Institute; McGill University*, with *Redpath Museum; Board of Trade; Bank of Montreal; *Victoria Bridge.*

Montreal (187 ft.), the largest city and chief commercial centre of the Dominion of Canada, is situated on the S.E. side of the triangular island of the same name, formed by two of the branches into which the *Ottawa* divides as it flows into the *St. Lawrence*. The island is about 30 M. long and 7-10 M. wide. The city, which covers an area $4\frac{1}{2}$ M. long and 2 M. wide, is built upon a series of gently-sloping terraces, culminating, 2 M. from the river, in the hill of *Mont Réal* or *Mt. Royal* (900 ft. above the sea), from which it derives its name. It is about 400 M. from New York, 980 M. from the Straits of Belle Isle (p. 103), and 2750 M. from Liverpool (300 M. nearer than New York). Though not even the capital of its own province (Quebec), Montreal exercises great political influence, and it is the seat of the chief banks, trading corporations, universities, hospitals, convents, and seminaries of Canada. In 1901 Montreal contained 267,730 inhab., an increase of 20 per cent over 1891. More than half were of French extraction, one-sixth Irish, one-seventh English, and one-thirteenth Scottish. About three-fourths of the population are Roman Catholics. With its suburbs, it now contains at least 350,000 people. The French mainly occupy the E. quarters of the city, the dividing line being St. Lawrence Boulevard. The streets in the lower part of the town are irregular, narrow, and dingy, but those of the upper part are broad and well-built. The chief business-streets, with the best shops, are *Notre Dame Street, St. James Street, and St. Catherine Street*, all running parallel with the River St. Lawrence; the streets immediately adjoining the river are also the scene of great bustle and activity. The handsomest residences are in the N.W. part of the city, adjoining the slopes of Mt. Royal. Most of the public edifices and many of the private residences are built of a fine grey limestone, quarried in the neighbourhood. The climate of Montreal is warm in summer and cold in winter, the thermometer often marking 80° Fahr. in the former, and sometimes, though not often, descending to 20° below zero in the latter. The mean annual temperature is 42°.

History. Situated in the French-speaking, Roman Catholic province of Quebec, within 45 M. of the frontier of the British and Protestant Ontario, Montreal partakes of the character of both and forms a microcosm of the composite Dominion of Canada. The French and Anglo-Saxon elements remain curiously distinct, socially as well as geographically. We first hear of the island of Montreal in 1535, when *Jacques Cartier* ascended the St. Lawrence and visited the flourishing Indian town of *Hochelaga*.

('Hosh-e-la-ga'), which lay at the foot of the mountain and has its name preserved in that of the E. ward of the modern city. [A tablet in Metcalfe St. (Pl. B, C, 5), near Sherbrooke St., marks what is supposed to have been the site of Hochelaga.] When *Champlain* visited the spot seventy years later Hochelaga had disappeared, as the result of a war between the Hurons and the Iroquois. The town of *Ville-Marie de Montreal* was founded in 1642 by *Paul de Chomedey, Sieur de Maisonneuve*, for 'La Compagnie de Montreal'. "The main point to be remembered in connection with the early settlement of Montreal is that it was the result of religious enthusiasm. . . It was an attempt to found in America a veritable 'Kingdom of God' as understood by devout Roman Catholics. The expedition was fitted out in France solely for that purpose, and the inception of the enterprise has many romantic particulars of 'voices and revelations' and 'providential occurrences' by which the zeal of its founders was supported and stimulated" (*S. E. Dawson*). During the early years of its existence the little post of Ville-Marie was engaged in an almost constant struggle with the Iroquois, and in 1660 the whole island outside the palisades of the town was overrun by the Indians. In 1663 the Company of Montreal abandoned the island and seigneurie *par pur don* to the Seminary of St. Sulpice, which still retains the position of Seigneur. Two years later the Marquis de Tracy arrived from France with the famous Carignan-Salieres Regiment, with which he did much to break the power of the Indians. By 1672 the town had a population of 1500 souls, and it soon became the entrepôt of the fur-trade with the West and the starting-point of numerous military and exploring expeditions (La Salle, Joliet, Hennepin, etc.), earning a true claim to the title of 'Mother of Cities'. In 1685 the city was surrounded by a wooden palisade 15 ft. high, which was replaced in 1721-26 by a bastioned wall and ditch; the citadel was also built at this time. [The wall ran from Victoria Sq. (Pl. D, 5, 6) to Viger Sq. (Pl. E, 4), in the course indicated by the present Fortification Lane (Pl. D, 5), and extended down to the river on each side.] Montreal, then containing 4000 inhab., was the last place in Canada held by the French, but was surrendered to the English a year after the capture of Quebec (Sept., 1760). In 1775-76 the city was occupied by the troops of the Continental Congress under Montgomery, but the citizens resisted all Franklin's attempts to persuade them to join in the revolution against British rule. Since then the history of Montreal has been one of uneventful growth and prosperity. In 1809 the 'Accommodation', the second steamer in America, was built at Montreal and began running regularly to Quebec. Montreal was made the seat of the Canadian Government in 1844, but lost this dignity after the riot of 1849, in which the Parliament Buildings were destroyed by the mob. The British garrison was removed in 1870.

Among the events which mark epochs in the city's prosperity were the opening of the Lachine Canal in 1825; the incorporation of the Champlain & St. Lawrence Railway, from Laprairie to St John's, in 1832; the formation of the Grand Trunk Railway (1852) and the construction of the Victoria Bridge (1859), the establishment of the Allan Line of Ocean Steamers in 1856, and the completion of railway communication with the Pacific Ocean via the Canadian Pacific Railway in 1886. The population of Montreal rose from about 10,000 in 1800 to 57,715 in 1851, to 90,323 in 1861, to 107,225 in 1871, to 155,337 in 1881, and to 216,650 in 1891. — Comp. 'The Jesuits in North America', by *Francis Parkman*; 'The Old Régime in Canada', by the same; the 'Semi-Centennial Report of the Montreal Board of Trade' (1893), 'Montreal after Two Hundred and Fifty Years', by *W. D. Lighthall*; and 'Montreal, Past and Present', by *Alfred Sandham* (out of print).

A number of the most interesting historical sites in Montreal have been marked by tablets erected by the *Numismatic & Antiquarian Society*.

Commerce and Industry. Montreal is the chief port of entry of Canada, lying at the head of ocean navigation (open for seven months in the year) and at the foot of the great river, lake, and canal navigation extending to the West. The canals afford a continuous inland waterway

from Port Arthur, at the head of Lake Superior, to Montreal, a distance of 1220 M. and here they connect with several lines of transatlantic steamers. These facts, taken in connection with its extensive railway-communications, account for the volume of its trade, which in the year 1905 was valued at \$ 151,131,963 (30,826,000*l.*; imports \$ 80,345,420, exports \$ 73,786,543). The tonnage of sea-going vessels entering the harbour in the same year was 1,940,056, four-fifths of which were British, while the tonnage of the river-craft amounted to 2,785,551. The chief exports are timber, grain, flour, cattle, phosphates, apples, butter, and cheese, the imports include iron, glass, tea, wine, groceries, and numerous manufactured articles and 'dry goods'. In 1905 the port owned 605 vessels, of 98,550 tons — The manufactures of Montreal, with an invested capital of about \$ 85,000,000, embrace boots and shoes, clothes, sugar, tobacco, beer, machinery, rubber, sacks, tools, silk, cotton, woollens, paints, carriages, and electrical goods, and there are numerous large flour-mills and saw-mills. They employ 60,000 hands, and their total value may be estimated at at least \$ 80,000,000 (16,000,000*l.*). In 1906 the municipal assessment was \$182,501,262 (36,500,000*l.*). The *Bank of Montreal* (see below), in St. James St, claims to have the largest capital and rest (upwards of \$ 25,000,000) of any bank in N. America and to be the fifth-largest in the British Empire.

On the S. side of the *PLACE D'ARMES* (Pl. E, 5), in the business-quarter of the city, stands the Gothic *Church of Notre Dame* (Pl. E, 5), built in 1824 by James O'Donnell, opposite the site of an earlier church of 1672. It is one of the largest ecclesiastical edifices in America, being 255 ft. long and 135 ft. wide, and can easily contain 12,000 worshippers. The two towers are 227 ft. high.

The INTERIOR is adorned in a rather florid style, but offers comparatively little of interest except the wood-carving in the *Choir*, the stained-glass windows of the *Baptistery*, the large *Organ*, and the somewhat over-ornamented *Lady Chapel*, behind the choir.

The S. W. TOWER contains a fine chime of 11 bells, one of which, 'Le Gros Bourdon', weighing upwards of 12 tons, is the heaviest in America. The top of this tower (adm. 25 c; elevator) commands a magnificent View of Montreal, which the visitor is strongly advised to enjoy before continuing his exploration of the city (comp. p. 136). *Mr. W. D. Howells* describes it as follows: — 'So far as the eye reaches it dwells only upon what is magnificent. All the features of that landscape are grand. Below you spreads the city, which has less that is merely mean in it than any other city of our continent, and which is everywhere ennobled by stately civic edifices, adorned by tasteful churches, and skirted by full-foliaged avenues of mansions and villas. Behind it rises the beautiful mountain, green with woods and gardens to the crest, and flanked on the east by an endless fertile plain, and on the west by another expanse, through which the Ottawa rushes, turbid and dark, to its confluence with the St. Lawrence. Then these two mighty streams commingled flow past the city, lighting up the vast champaign country to the South, while upon the utmost southern verge, as on the northern, rise the cloudy summits of far-off mountains' ('Their Wedding Journey', chap. viii).

Adjoining Notre Dame on the W. is the *Seminary of St. Sulpice* (Pl. 4, E, 5), one of the oldest buildings in Montreal, dating from 1710 (memorial tablets). The E. wing has been rebuilt, and the main central entrance has been swept away. This edifice is now used for the business-offices of the Seminary (comp. p. 129), while its educational work is carried on in the building described at p. 135. — The other buildings surrounding the Place d'Armes include various banks and insurance-offices, among which, opposite the Seminary of St. Sulpice, is the *Bank of Montreal*, with its Corinthian portico, its im-

posing 'Guastavino' dome (72 ft. in diameter), and its handsome interior, one of the richest corporations in America (comp. p. 130). Adjoining the Bank of Montreal, at the corner of St. James St and St. François Xavier St., is the **Post Office** (Pl. E, 5; p. 127), a building of grey limestone with a mansard roof. At the corner of Notre Dame St is the *New York Life Insurance Building* (view from tower). In the middle of the Place d'Armes is a spirited '*Statue of Maisonneuve*' (p. 129), by Hébert, erected in 1895. At the corners of the pedestals are figures of Jeanne Mance (p. 136), an Iroquois warrior, Charles Lemoyne, the leading colonist of Ville-Marie (p. 129), and Lambert Closse, the first town-major of Ville-Marie, who fell fighting the Iroquois. A tablet on the E. side of the square marks the house of the *Sieur Duluth* (1675), who gave his name to Duluth.

Following NOTRE DAME STREET (Pl. D-F, 6-2) to the E. from the Place d'Armes, we soon reach (left) the **Court House** (Pl. E, 4), a large edifice in a classical style, with a central dome, and the **City Hall** (Pl. E, 4), a huge building with mansard roofs — Opposite the City Hall stands the interesting old **Château de Ramezay**, a low, rambling building, dating from about 1705, opened in 1895 as a *Civic Museum* under the control of the Numismatic and Antiquarian Society (curator, R. W. McLachlan; open free daily, 10-6; catalogue 25 c.).

The building was erected about 1705 by *Claude de Ramezay*, Governor of Montreal (1703-24). Later, under the name of 'India House', it became the headquarters of the fur-trade in Canada. It was the official residence of the British Governors ('Government House') from 1724 to 1837, and in 1775-76 it was the headquarters of the Continental Army and Commissioners (Franklin, Chase, and Charles Carroll, comp. p. 129). In 1837, when parliamentary government was withdrawn from Canada, the château became the seat of the Special Council that legislated in its stead; and in 1845, when Montreal became the seat of government for the United Province of Canada, it was used for departmental offices. On the transference of the seat of Government to Ottawa in 1849, Government House was successively occupied by the Law Courts, a normal school, and the medical branches of Laval University. It was sold to the city in 1893.

The contents include a bell and other relics of Louisbourg (p. 69); old views and engravings, French Canadian relics, Indian articles. In the basement are substantial vaults, with an old oven in the side of the fireplace. [Some of the rooms, including one furnished in the style of an old Canadian farm-house (the dwelling of a 'habitant', p. 132), are not usually shown except to purchasers of the catalogue.] — The château also contains a *Free Public Library*, with a special 'Montreal' department.

At the back of the Court House and City Hall extends the CHAMP-DE-MARS (Pl. E, 4), formerly the parade-ground of the British troops, but now somewhat neglected-looking. — In front of the Court House and City Hall is JACQUES CARTIER SQUARE (Pl. E, 4), with a column surmounted by a statue of *Lord Nelson*, erected in 1808.

At the S. end of the square, near St Paul St., stood the mansion of the *Marquis de Vaudreuil*, last French Governor of Canada. — The *Hubert Lacroix House* in St. Jean Baptiste St. (No. 25; Pl. E, 5), now occupied as a warehouse by Messrs. Kerry, Watson, & Co., is a good example of the dwelling of a rich Montreal merchant towards the close of the

17th century — *St. Amable* and *St. Vincent Sts.* (Pl. E, 4, 5) also contain some interesting old French houses.

The lower end of Jacques Cartier Sq abuts on the river. By turning to the left, we soon reach ***Bonsecours Market** (Pl. E, 4), a large building nearly 500 ft long. This should be visited on Tues. or Frid. between 5 and 10 a.m., when it is crowded by the 'Habitants' of Lower Canada, offering their farm produce for sale, or buying clothing, shoes, trinkets, rosaries, etc.

To the E. of the market stands the quaint little church of *Notre Dame de Bonsecours*, founded by Sister Marguerite Bourgeois in 1657, dating in its present form from 1771, and sadly spoiled by a recent tasteless restoration. Some years ago it was nearly swept away to make room for a railway-station, but was saved by the intervention of a few Protestant lovers of historical association. Inside, suspended from the ceiling, are several votive offerings in the form of ships. View from the tower (adm. 10 c.).

A little to the N. of this point is **VIGER SQUARE** or **GARDEN** (Pl. E, 3, 4), the chief promenade of the French quarter (good music on summer evenings). It contains a statue of *J. O. Chenier* (b. ca. 1806, killed at St. Eustache in 1837), unveiled in 1895. Here, too, are the large *Place Viger Hotel* (p. 125) and the *Viger Square Station* of the C.P.R. (p. 125). A tablet on the latter marks the site of the old French citadel.

We may now follow **COMMISSIONERS STREET** (Pl. E, 4-6) to the W. along the river to the ($\frac{1}{2}$ M.) **Custom House** (Pl. E, 5), a triangular building of grey limestone, with a clock-tower, situated on the spot where Maisonneuve made his first settlement (p. 129, memorial tablets). A little farther to the W. are the *Examining Warehouse* and the *Harbour Office* (Pl. E, 6).

The walk between the Bonsecours Market and the Custom House affords a good view of the **Harbour**, with its wharves and shipping. The river-front is protected by a solid stone embankment, $1\frac{1}{2}$ M. long, beginning at the Lachine Canal (Pl. E, 7). The wharves, including those of the Allan, Dominion, C. P. R., Richelieu & Ontario, and other important steamship lines, lie about 10 ft. below the level of the embankment, the object of this arrangement being to allow the ice to pass over them, when it breaks up at the end of winter. [The so-called '*Ice Shove*' is a very striking and imposing sight, but it is only by accident that one sees it, as it is impossible to predict its appearance.] Plans are in contemplation for the construction of large wharves jutting out into the river, and this has involved the building of a long *Guard Pier* or *Ice Breakwater*, stretching to the E. from the N. end of the Victoria Bridge. Vessels drawing $27\frac{1}{2}$ ft can reach Montreal at low water, and the channel is usually unobstructed by ice from May to November inclusive. Comp. p. 238.

From the Examining Warehouse we now ascend **MCGILL STREET** (Pl. E, 6), passing the substantial *Grand Trunk Railway Building* (Pl. E, 6), to ($\frac{1}{3}$ M.) **VICTORIA SQUARE** (Pl. D, 5, 6), occupying the site of the old hay-market. It is embellished with a colossal bronze statue of *Queen Victoria*, by Marshall Wood. To the N. of the square, at the corner of Lagauchetière St. and Beaver Hall Hill, stands the *Presbyterian Church of St. Andrew* (Pl. D, 5). A

house to the E. of the square bears a tablet marking it as the residence of James McGill (p. 135).

St. Patrick's Church (Pl. D, 5), in St. Alexander St., to the E. of this point, is the chief church of the Irish Roman Catholics of Montreal.

Following Lagauchetière St to the left (W), we reach *DOMINION SQUARE (Pl. C, 6), the finest square in the city, embellished with tasteful flower-beds and with two Russian guns captured at Sebastopol. Near the middle of the S.E. side is a statue of *Sir John A. Macdonald* (d. 1891; p. xxv), erected in 1893, and to the N.W. is a monument commemorating the Canadians who fell in the *South African War* of 1899-1900. At the S.E. corner of the square is the *Archbishop's Palace*, to the N. of which stands the imposing **Cathedral of St. James* (Pl. C, 6), almost invariably (though quite erroneously) known as *St. Peter's*, a reproduction on a reduced scale of *St. Peter's* at Rome, founded in 1868 and not yet completed. It is 333 ft. in exterior length, 222 ft. in width across the transepts, and 80 ft. high to the ridge of the roof. The portico, with its huge Corinthian pillars, is an effective feature. Over the façade is a row of colossal bronze statues of saints. The dome is 250 ft. high and 80 ft. in diameter; it is surmounted by a cross 18 ft. high. The interior produces an effect of great light and space. The exterior, with its small and rough-faced stones, has a rather mean and prison-like appearance. — Adjoining the N.W. corner of St. James's is a statue of *Monsignor Bourget* (1797-1883), second Bishop of Montreal, by J. B. Picher, with groups of Religion and Charity on the pedestal. To the N. of St. James's, at the corner of *Dorchester St.*, is the building of the *Young Men's Christian Association*. On the W. side of Dominion Square are the *Windsor Hotel* (p. 125), the *Dominion Square Methodist Church* (Pl. 1; C, 6), and the handsome *St. George's Church* (Epis.; Pl. C, 6). The huge and amorphous structure behind the Windsor Hotel is the *Victoria Skating Rink* (p. 126).

In Windsor St., just below Dominion Sq., is the handsome, castle-like **Windsor Street Station* (Pl. C, 6) of the Canadian Pacific Railway; and at the foot of Windsor St. is the *Bonaventure Station* (Pl. D, 6, 7) of the Grand Trunk Railway, also a spacious structure.

In Drummond St., near Burnside St., is the new building of the *Natural History Museum* (Pl. 5; B, 6), containing collections of Canadian natural history and ethnology (adm. 10 c).

ST. CATHERINE STREET (Pl. B-F, 7-1), bounding Dominion Sq. on the N., leads to the E. to **Christchurch Cathedral* (Pl. C, 5; Epis.), a well-proportioned and effective structure in the Decorated Gothic style, erected in 1859. It is 212 ft. long and 100 ft. wide across the transepts; the spire is 224 ft. high. The octagonal *Chapter House* groups well with the Cathedral. In the rear are *Bishop's Court*, the *Bishop's Palace*, and the *Rectory*. Adjoining the cathedral is a *Memorial of Bishop Fulford*, Bishop of Montreal (1850-68), and first Metropolitan of Canada.

Near this point, in Cathcart St., is the *Victoria Rifles Armoury* (Pl. C, 5). — A little farther on, at the corner of *Dorchester St.*, is the *Fraser Institute*

(Pl. C, 5), which contains a free public library (35,000 vols.) and a small collection of pictures.

A little farther on, at the corner of *Phillips Square*, is the **Art Gallery** (Pl. C, 5), much enlarged in 1893 and containing a collection of paintings, bronzes, etc. (open 10-4, adm. 25 c.). Spring and autumn exhibitions of art are held here, and fine loan collections are frequently on view. Among the permanent possessions are specimens of *Corot*, *Diaz*, *Koekkoek*, *Verboeckhoven*, *Villegas*, *Roulet*, *Vernier*, *W. B. Baker*, *Henry Bright*, *J. M. Barnsley*, *Cooper*, *Tholen*, *F. M. Boggs*, *Henner*, *Richt*, *Troyon*, *Höppe*, *Israels*, *Laugée*, *Mauve*, and *P. de Hooghe*.

The **St. James Methodist Church* (Pl. C, 5), at the corner of St. Catherine St. and St. Alexander St., is one of the handsomest in the city, with two square towers of unequal height, surmounted by lanterns and spirelets.

Bleury Street, which leads to the S. from St. Catherine St., a block farther on, contains the **Church of the Gesù** (Pl. D, 5), or *Jesuit Church*, somewhat in the style of the church of that name in Rome. It is noted for its music (esp. on Sun. evening), and the interior is adorned with elaborate frescoes in grisaille. Adjacent is the *Jesuit College of St. Mary*, attended by about 400 students and containing a collection of archives. Near St. Mary's College is the *Protestant House of Refuge* (Pl. D, 5).

A little farther on, to the left, is the *Nazareth Asylum for Blind Children* (Pl. D, 4), the small chapel of which has a good façade in the Norman style and contains frescoes by Bourassa (see below). At the next corner is the *St. François Xavier Orphan Asylum* (Pl. D, 4).

About $\frac{1}{3}$ M. farther on, at the corner of St. Denis St. (right), stands the **Church of Notre Dame de Lourdes* (Pl. D, 3), built in 1874 to commemorate the Apparition of the Virgin at Lourdes.

The church consists of a nave, with narrow aisles, transept, and choir, and is in a Neo-Byzantine style such as is seen in some of the churches of Venice. The central dome is 90 ft. high. It was designed by the Canadian painter and architect *Napoleon Bourassa*, who has adorned it with a series of well-executed frescoes, emblematical of the predestination and immaculate conception of the Virgin. The *Basement Chapel* (reached by passing to the right of the choir into the vestry and then descending) represents the appearance of the Virgin to the peasant-girl Bernadette Soubirous at Lourdes in 1858.

On the opposite side of the street stands the *R. C. Church of St. James* (Pl. D, 3), with a graceful tower. Behind St. James, in *Mignonne St.*, is the *Reformatory* (Pl. D, 3).

If we follow *DORCHESTER STREET* to the W. from Dominion Square, we soon pass the handsome *American Presbyterian Church* (Pl. C, 6) and the *Crescent Street Presbyterian Church* (Pl. C, 6) and reach ($\frac{1}{3}$ M.) the **Grey Nunnery* (Pl. B, 7), a large hospital and asylum for foundlings, orphans, the aged, and the infirm, founded in 1738 and under the management of the Grey Sisters (*Sœurs Grises*). The buildings on the present site (entr. in Guy St.) date from 1871. This establishment, consisting of 700 professed sisters and 310 novices, lay sisters, and postulants, is one of the most popu-

lous conventual institutions in the world. Noon is the best time for visitors (formal reception on New Year's Day) The red cross in one corner of the grounds (adjoining Dorchester St.) commemorates a double murder committed near this spot. The daughter of Ethan Allen (1738-89) of Vermont was a sister of this nunnery, and her name is associated with a romantic legend.

Guy St. leads to the N., past the entrance of the Grey Nunnery, to ($\frac{1}{3}$ M.) *SHERBROOKE STREET* (Pl. A-D, 1-7), perhaps the handsomest residence-street in Montreal. The sleighing scenes here in winter are probably unequalled outside of St. Petersburg. Following the street to the left (W.) for a short distance, we reach (right) the *Collège de Montreal*, or *Petit Séminaire* (Pl. A, 7), and the *Grand Séminaire*, together forming the educational portion of the seminary of St. Sulpice (comp. p. 130), and consisting of a main building 725 ft. long, with three subsidiary buildings in front and two behind. The Collège gives a complete course in the ecclesiastical sciences. It occupies the site of the old *Fort de la Montagne*, two of the towers of which, erected for defence against the Indians, are still standing (memorial tablets.) There were originally four of these towers, connected by a curtain-wall pierced with loopholes. On the hillside above is a large *College of Philosophy*, for the study of philosophy and natural science. The three institutions are now attended by 675 students, most of whom are preparing for the priesthood.

To the W. of this point lies the suburb of *Westmount*, including the W. half of Mt. Royal (p. 136), *Westmount Park*, a *Public Library*, and a *Public Hall*. The views from the higher parts of the district (reached by the Guy St. cars) are very fine.

We may now retrace our steps to the E. along Sherbrooke St., passing the new *Erschine Presbyterian Church* (Pl. B, 6), at the corner of Ontario Ave., and in $\frac{3}{4}$ M. reach the grounds of *McGill University* (Pl. B, 5), one of the leading universities of Canada, now attended by 1200 students, taught by nearly 200 professors and lecturers.

McGill College was founded in 1821 with the bequest of *James McGill* (1744-1813), a native of Glasgow (who is buried in front of the main building), and has since been richly endowed by other public-spirited citizens of Montreal. It now includes the four faculties of Arts, Law, Medicine, and Applied Science; and with it are affiliated the Diocesan, Wesleyan, Presbyterian, and Congregational Colleges of Montreal, Morrin College at Quebec (p. 153), the Stanstead Wesleyan College at Stanstead, and Vancouver College at Vancouver. The course in Arts provides for the education of women in separate classes. The university owes much of its success to *Sir William Dawson*, the eminent geologist, who was its principal till 1893, when he was succeeded by *Dr. William Peterson*.

The buildings include the original *McGill College*; the *Workman Building*, the *McDonald Physics Building*, the *McDonald Engineering Building*, and the *McDonald Chemistry & Mining Building* (opened in 1898), all unsurpassed in America for completeness of equipment; the *Redpath Museum* (Pl. B, 5; open 9-5; adm 10 c), containing valuable collections of natural history (lifesize model of a megatherium, etc.); the *Redpath Library*, facing McTavish St., with accommodation for 250,000 vols.; the *Medical Building*; the *Observatory*; the *Royal Victoria College* (Pl. C, 5), a residential college for women students, endowed by Lord Strathcona and opened in 1899 (with

a statue of Queen Victoria, by the Princess Louise, in front of the entrance); and the *Conservatorium of Music*, opened in 1904 and situated just to the S. of Victoria College. The *Presbyterian* and *Wesleyan Colleges* are within the same enclosure as McGill College, and the *Congregational College* (Pl. B, 5) is on the other side of McTavish St. The *McGill Normal School* (Pl. 3, D, 6), Belmont St., is also affiliated to McGill University. — In Sherbrooke St., at the corner of McGill College Ave., opposite the main entrance to McGill University, is *Strathcona Hall* (Pl. C, 5), the Y M C A. of the University. The *Students' Union*, a handsome building erected by Sir William McDonald at a cost of \$225,000, lies close by, at the corner of Victoria St.

Behind the grounds of McGill University, on the side of Mt. Royal, is the *Main Reservoir* (Pl. B, 5) of the city water-works, with a capacity of 36,500,000 gallons. Beyond this, in Pine Ave., are the handsome buildings of the *Royal Victoria Hospital* (Pl. B, 4), opened in 1894, with accommodation for 250 patients. It cost over \$1,000,000 and is a gift from Lord Mount Stephen and Lord Strathcona. Adjacent is a new *Nurses' Home*.

By following Pine Ave. towards the right (E), we reach the (1/3 M.) **Hôtel Dieu* (Pl. B, 3, 4), a large hospital under the care of the *Hospitalières de St. Joseph*.

This institution was founded in 1644 by *Mlle. Mance*, one of the original settlers of Montreal, with the aid of funds contributed by Mme. de Bullion, a French lady of rank. The present buildings, in which 3000 patients are treated yearly, date from 1861. The original site, in St. Paul St., is now covered by a group of warehouses known as *Nuns' Buildings* (Pl. E, 5). Eighty of the nuns are cloistered and do not go outside of the grounds. — Opposite the *Hôtel Dieu* is the *Montreal School of Medicine and Surgery* (French).

At the *Hôtel Dieu* we are in convenient proximity to the *Mountain Elevator* (Pl. A, B, 4; 5 c.) ascending to **Mount Royal Park* (Pl. A, 3-6), which may also be reached by a winding roadway or by long flights of steps ascending from the head of Peel St. (Pl. B, 5) and near the elevator. The park, covering 460 acres, is one of the most beautifully situated in America, and its natural advantages have been skilfully supplemented by the taste and experience of Mr. F. L. Olmsted. The mountain consists of a mass of trap-rock thrown up through the surrounding strata of limestone.

From the top of the Incline Railway we reach the *Outlook Platform* by taking the path to the left and then following the drive. [A path beginning just on this side of the platform descends to the head of the Peel St. Steps.] The **View of the city and its environs from the platform is superb. The air of distinction which differentiates Montreal from most American cities is, perhaps, due to the number of church-spires and large charitable or educational institutions, together with the comparative unobtrusiveness of merely commercial buildings. Beyond the city flows the St. Lawrence, with the Island of St. Helen and the Victoria Bridge. The hills on the other side of the river, named from left to right, include Montarville, Beloeil (p. 135) or St. Hilaire, Mt. Rougemont, with Mt. Yamaska behind it, Mt. Shefford, and the conical Mt. Johnson or Monnoir. The Adirondacks are visible in the distance to the S.W. and the Green Mts. to the S.E.

Drivers usually extend their trip so as to include the large *Protestant* and *Roman Catholic Cemeteries* (beyond Pl. A, 3), lying to the N. of the park (the latter with a 'Route de Calvaire', with the Stations of the Cross). The *Belvedere*, on the hill rising above the cemeteries, commands a fine view of

the lower valley of the Ottawa, with the Lake of the Two Mts., Lake St Louis, and the whole island of Montreal. The cemeteries may also be reached by electric tramway (Park and Island Railway; fare 10c.).

Montreal possesses another pleasant park on the *Island of St. Helen* (beyond Pl. F, 4), which was named after Champlain's wife, the first European lady that came to Canada. It is reached by a small steamer plying from *Bonsecours Wharf* (Pl. F, 4). A fort and barracks, formerly used by the British troops, still remain — *Lafontaine Park* (Pl. C, D, 1, 2), with its artificial lake, may also be mentioned; it has an area of 85 acres.

One of the chief lions of Montreal is the "**Victoria Bridge** (beyond Pl. F, 7), a permit to examine which may be obtained at the offices of the Grand Trunk Railway (p. 132).

The *Victoria Tubular Bridge*, which was designed by *Robert Stephenson* and *A. M. Ross* and built in 1854-59, was on the same principle that had been successfully applied by Stephenson a few years earlier in the *Britannia Bridge* over the *Menai Strait*. It was $1\frac{3}{4}$ M in length and consisted of 24 tubes supported by 24 piers besides the terminal abutments. The tubes, which were of wrought iron, were 16 ft wide and $18\frac{1}{2}$ -22 ft. high. They were traversed by a single line of railway. The total cost of the bridge was \$ 6,300,000 (1,260,000 £). This bridge, long regarded as one of the greatest bridges in the world, finally proved inadequate for the traffic and was replaced in 1898-99 by the *Victoria Jubilee Bridge*, a pin connected truss-bridge with 25 spans, accommodating two railway-tracks, together with two roadways and two footpaths. The new bridge rests on the same piers as the old one, and was constructed over and around the latter without disturbing the traffic. The engineer was *Mr. Joseph Hobson*. The total cost was \$ 20,000,000 (4,000,000 £). — Near the N. end of the bridge is the *Immigrants' Burial Ground*, containing a memorial to 6000 immigrants who died of ship's-fever in 1847-8.

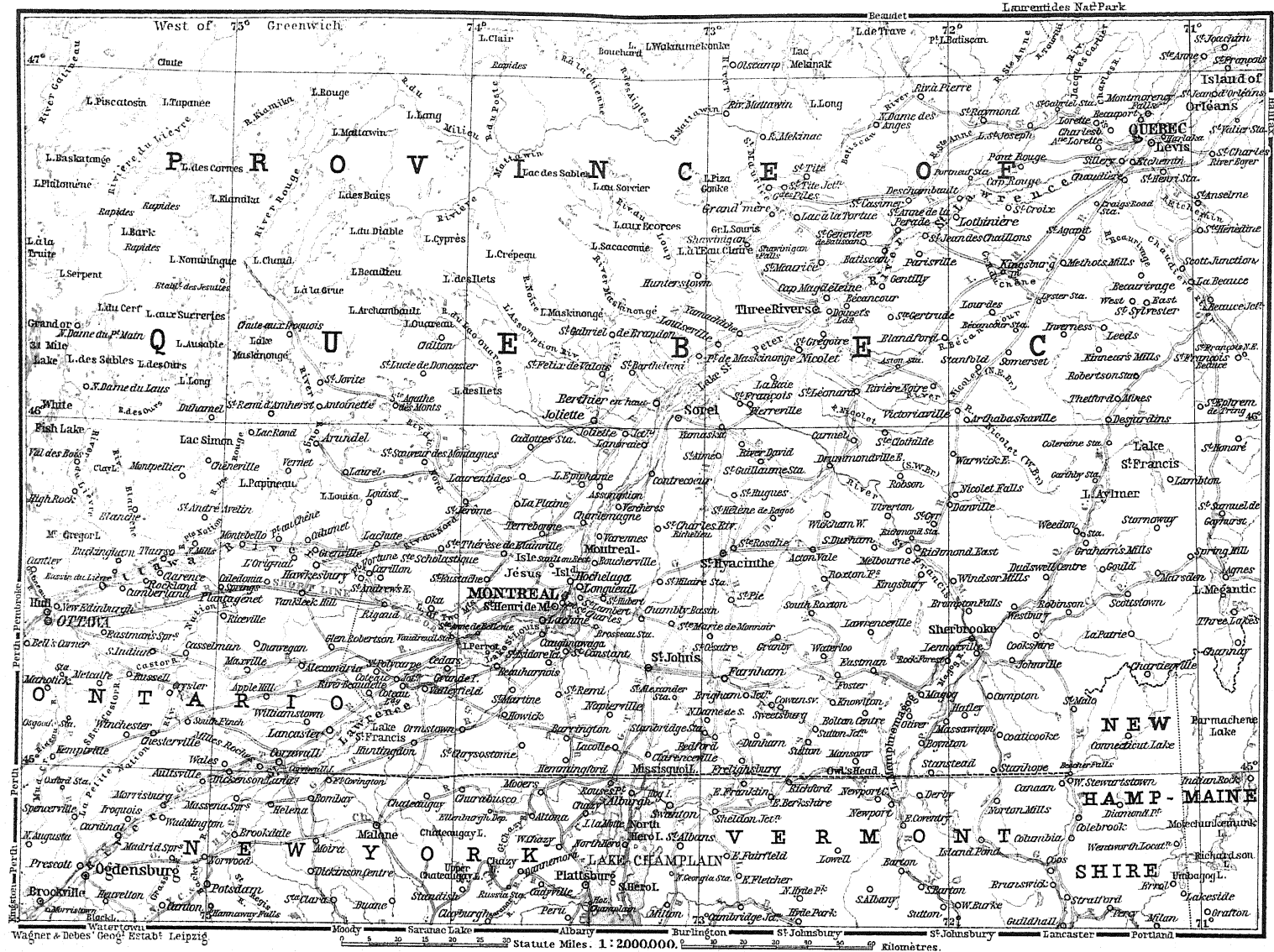
Among other buildings, of more or less interest, not included in the foregoing survey, are the *Montreal General Hospital* (Pl. D, 4), in *Dorchester St.*, at the corner of *St. Dominique St.*; the *Alexandra Hospital* (beyond Pl. D, 7), in *Charron St.*, *Point St. Charles*, opened in 1906, and the *St. Paul's Hospital*, in *Sherbrooke St. East* (beyond Pl. D, 1), subsidized by the city for infectious diseases among the English-speaking and the French-speaking inhabitants respectively; the *Notre Dame Hospital* (Pl. E, 4), *Notre Dame St.*; the *Jacques Cartier Normal School* (Pl. D, 1, 2), in *Sherbrooke St. East*; the *Peel Street High School* (Pl. C, 6); the *Aberdeen School* (Pl. C, 3), *St. Denis St.*; the *Church of St. John the Baptist* (Pl. B, 2); the *Hochelaga Convent*, on the *St. Lawrence*, below the city; the *Synagogue* (Pl. C, 6), in a pseudo-Egyptian style, in *Stanley St.* (site of first synagogue in Montreal marked by a tablet near *Notre Dame St.*, to the W. of the Court House); the **Board of Trade Building* (Pl. E, 5), *St. Sacrament St.*, a large edifice of red sandstone in a modified Renaissance style, rebuilt since a fire in 1900, at a cost of \$ 600,000; and the *Sovereign Bank*, a ten-story building in *St. James St.* To the N.W. of the city, on the slopes of *Mt. Royal*, stands the *Villa Maria Convent* of the Sisters of the Congregation of *Notre Dame*, occupying *Monklands*, a former residence of the *Governors-General of Canada*. The sisters of this order have about 45,000 girls in their schools throughout Canada. The adjacent *Maison Mère* of the order, with its finely decorated church, was burned down in

1893, but a new building to take its place is being erected in Sherbrooke St., between Atwater Ave and Elm Ave. (beyond Pl. A, 7). — The *Laval University Building* (p. 152), at 185 St. Denis St., a Renaissance structure with a frontage of 190 ft., includes the Faculties of Law, Medicine, and Arts; its Theological Faculty is at 1197 Sherbrooke St., its Polytechnic School at 1999 St. Catherine St., and its Veterinary Department at 378 Craig St. The Montreal branch of Laval has about 1000 students. — Among the finest private residences in Montreal are those of *Mr. Robert Meighen*, *Mrs. J. C. McIntyre*, *Mr. R. Reford*, *Mr. C. R. Hosmer*, and *Mr. R. B. Angus*, all in Drummond St. (Pl. B, C, 5, 6; Nos. 140, 317, 260, 302, & 240), *Sir Montague Allan* (Ravenscrag), *Lord Strathcona*, 1157 Dorchester St.; *Mr. James Ross*, 360 Peel St.; and *Sir Geo. A. Drummond*, 874 Sherbrooke St.

Other historical points marked by tablets are the *House of La Salle* (1643-87), at the corner of St. Peter and St. Paul Sts. (Pl. E, 6), the *House of La Motte Cadillac*, founder of Detroit, in St. Lawrence Boulevard (on Leeming-Miles Building, Pl. E, 5); the site of the residence of *Sir Alex. Mackenzie*, discoverer of the Mackenzie River (1793), in Simpson St.; the birthplace of *Pierre (d'Iberville)* and *Jean Baptiste (de Bienville) Lemoigne*, the discoverers of the mouths of the Mississippi (1699), in St. Paul St., to the E. of Place Royale (Pl. E, 5); and the *North-West Fur Company's Stores*, Vaudreuil St.

Environs of Montreal.

Perhaps the most popular short excursion from Montreal is that to the **Rapids of Lachine*, described at p. 230. Trains leave the Bonaventure Station (Pl. D, 6) for (8 M.) *Lachine* (p. 230) about 8 a.m., 1.30 p.m., and 5 p.m., to connect with the steamers about to run the rapids. The electric tramway to *Summerlea* (see p. 126) passes within 250 yds. of *Lachine Wharf* (fare 15 c., from City Limits 10 c.). The drive to Lachine is also pleasant. Drivers should go by the upper road, passing the aqueduct and wheel-house of the Montreal Water Works, and return by the lower road, skirting the river and affording a good view of the rapids. — Another favourite point for a drive (electric car) is (7 M.) the *Sault-au-Récollet*, a rapid on the Rivière des Prairies or 'Back River', to the N.W. of the city, so named from a Récollet priest drowned here by the Hurons in 1626. These drives afford some idea of the fertile *Island of Montreal*, with its famous apple-orchards ('Pomme Grise', 'Fameuse', etc.). — *Laprairie*, a village with about 1450 inhab., on the S. bank of the St. Lawrence (ferry thrice daily), 8 M. to the S.W. of Montreal, was the starting-point of the first railway in British N. America (comp. p. 129). It possesses an old fort, attacked in the 'Battle of Laprairie' (1691) by *Col. Peter Schuyler* and his New England troops. — *Longueuil*, opposite Hochelaga (p. 128), with 2835 inhab., and *St. Lambert* (p. 14) are frequented for rowing and sailing (ferry). — An excursion should be made to **Beloeil Mountain* or *Mt. St. Hilaire* (1600 ft.), which rises about 16 M. to the E. and commands a fine view of Montreal, the St. Lawrence, Lake Champlain (40 M. to the S.), etc. It is reached by the Grand Trunk Railway to (22 M.) *St. Hilaire* (not Beloeil). St. Hilaire may also be reached twice weekly by steamer (Richelieu & Ontario Navigation Co.), via Sorel and the Richelieu River (comp. p. 143; 16 hrs.). Close by is a pretty lake, which affords boating and bathing. Beloeil Mt., like Rougemont (p. 16) and Mt. Royal itself, is a mass of eruptive rock, protruding through the surrounding limestone. — Other pleasant points for short excursions are *Caughnawaga* (p. 47) *Ste. Anne* (p. 185), *Montarville*, *Varennes* (p. 143), and *Verchères* (p. 143).



Longer excursions may be made to *Chambly* (p. 19), *Lake Memphremagog* (p. 18), *Lake Champlain* (p. 13), *Ausable Chasm* (p. 13), the *Adirondacks* (pp. 13, 16), the *White Mountains* (p. 19), *Carillon*, on the *Ottawa* (p. 185), etc.

The geologist will find much to interest him in the district round Montreal, in the immediate vicinity of which the Pleistocene, Lower Helderberg, Hudson River, Utica, Trenton, and Chazy formations are all represented. Mt. Royal is an intrusive eruptive mass, mainly of diabase.

From Montreal to *St. John*, see R. 16, to *Quebec*, see R. 29; to *Ottawa*, see R.R. 34, 37; to *Toronto*, see R.R. 38, 47, to *New York*, see R. 2; to *Boston*, see R. 3, to *Portland*, see R. 9, to *Port Arthur* and *Fort William*, see R. 48.

29. From Montreal to Quebec.

a Viâ the Canadian Pacific Railway (N. Shore of the St. Lawrence).

173 M. CANADIAN PACIFIC RAILWAY in $4\frac{1}{2}$ -7 $\frac{1}{2}$ hrs. (fare \$4.50; sleeper \$1.50; parlor-car 75c.) This is the most direct route between the two cities. The trains start from the Viger Sq. Station, connection in some cases being made from Windsor Street Station.

Montreal, see p. 125. The train passes the suburban station of (1 M.) *Hochelaga* (p. 128), crosses the 'Back River' at (10 M.) *Sault-au-Récollet* (p. 138), and diverges to the right (E.) from the main transcontinental line at (13 M.) *St. Martin Junction* (Rail Restaurant). At (18 M.) *St. Vincent de Paul* is the large *Provincial Penitentiary*. We cross the N. branch of the *Ottawa* at (24 M.) *Terrebonne*, with its large limestone quarries.

The line now runs between the *St. Lawrence* on the right and the *Laurentide Mts.* (average height ca. 1600 ft.) to the left, the mountains being at first 30 M. from the river but approaching it more closely as we proceed. The district traversed is perfectly flat and carefully cultivated. The long narrow fields into which it is cut up are due to the French custom of equal subdivision of estates and the desire to give each heir a share of the river-frontage. The churches and presbyteries, with their shining tin spires and roofs, are the most prominent buildings in the numerous villages.

40 M. *Vaucluse*. From (49 M.) *Joliette Junction* a branch-line runs to *Joliette* (p. 142). 57 M. *Berthier Junction*, for *Berthier* (1364 inhab.); 71 M. *Maskinongé* — Near (75 M.) *Louiseville* (1565 inhab.) are the *St. Leon Springs* (Hotel, \$2-3), a frequented health-resort, the water of which is bottled and much used throughout Canada. The springs may also be reached by steamer. — 81 M. *Yamachiche*, 88 M. *Pointe du Lac*.

96 M. *Three Rivers* or *Trois Rivières* (*Hôtel Dufresne*, \$2-2 $\frac{1}{2}$; *Dominion Hotel*, \$1 $\frac{1}{2}$; *Sanatorium*, for hydro-electric treatment, French; *Rail. Restaurant*; U. S. Consul, *Mr. James H. Worman*), one of the oldest towns in Canada, having been founded in 1634, lies at the mouths of the *St. Maurice River*, and at the head of tide-water in the *St. Lawrence*. It is the outlet for an important lumbering-district, and manufactures stoves and car-wheels from the bog-iron

ore of the district. Pop. (1901) 9981. The *Cathedral* is a building of some pretensions, and there are other large Roman Catholic institutions. The *College* has 300 pupils. *Benjamin Sulte*, the French-Canadian historian, is a native of Three Rivers, and has celebrated its historic associations in his 'Chronique Trifluvienne'.

The *St. Maurice River* is about 300 M. long and drains a very large area. Its lower course is a succession of falls and rapids; and a pleasant excursion may be made to the **Shawinigan* or *Shawenegan Falls* (150 ft., see below). Good fishing and shooting may be obtained along its course (guides, etc., at Three Rivers).

On the S shore of the St. Lawrence, opposite Three Rivers, lies *Doucet's Landing* (p. 144).

We now cross the St. Maurice to (98 M.) *Piles Junction*, whence a branch-line runs viâ *Garneau Junction* (p. 142) to (27 M.) *Grandes Piles*.

Lac à la Tortue (19 M.; Shawanegan Ho.), on this railway, may be made the starting-point for a visit to the above-mentioned *Shawinigan Falls*. The nearest station to the falls is, however, that mentioned at p. 142.

108 M. *Champlain*; 115 M. *Batiscan*, at the mouth of the river of that name (comp. p. 163), 119 M. *Ste. Anne de la Perade*, at the mouth of the *Ste. Anne River*, with a large two-towered church (right); 131 M. *Lachevrotière*; 134 M. *Deschambault*; 137 M. *Port-neuf*, with wood-pulp mills. At (147 M.) *Pont Rouge* we cross the *Jacques Cartier River*, famous for its salmon. 160 M. *Belair*; 166 M. *Lorette* or *Ancienne Lorette*, about 3 M. from *Indian Lorette* (see p. 162). As we approach Quebec our line is joined on the left by that from Lake St. John (see R. 32).

173 M. *Quebec*, see R. 30.

b. Viâ the Intercolonial Railway (S. Shore of the St. Lawrence).

164 M. INTERCOLONIAL RAILWAY in 4½-7 hrs. (fare \$4 95, sleeper \$1 50, parlor-car 75c.). The *Ocean Limited Express* (4½ hrs.) runs in summer only; clocks and time-tables follow the 24-hour system (comp. p. 83).

The trains start from the Bonaventure Station, cross the St. Lawrence by the Victoria Bridge, and follow the tracks of the Grand Trunk Railway to (35½ M.) *St. Hyacinthe* (see p. 141). The Intercolonial Railway here diverges to the left and runs in an almost straight line all the way to Lévis. — 38 M. *Ste. Rosalie*; 44 M. *St. Edward*; 54 M. *St. Eugène*; 61 M. *St. Germain*. 64½ M. *Drummondville*, a thriving little manufacturing town, with 1450 inhab., is supplied with excellent water-power from Lord's Falls on the *St. Francis River*, which is crossed here by two steel bridges (comp. p. 19). — 84 M. *St. Leonard*, the junction of a branch-line to (14 M.) *Nicolet* (p. 144); 92 M. *Aston*, the junction of a short line to *Doucet's Landing* (p. 144); 117 M. *Villeroy*, for short branches to *Lyster* (S.; p. 141) and *St. Jean des Chaillons* (N.; p. 144). Between *Villeroy* and (133 M.) *Laurier* the region abounds with caribou and deer. — 154 M. *Chaudière*. A glimpse of the *Chaudière Falls* (p. 141) is obtained here. At (154½ M.) *Chaudière Junction*

the line connects with the Grand Trunk Railway for Sherbrooke, Lennoxville, and Portland. From Chaudière to (163 M.) *Lévis* and (164 M.) *Quebec*, see R. 29c.

c. **Viâ the Grand Trunk Railway (S. Shore of the St. Lawrence).**

174 M. GRAND TRUNK RAILWAY in 6½-12 hrs (fares as in R. 29a).

From *Montreal* (Bonaventure Station) to (6½ M.) *St. Lambert*, see p. 14. From this point the line runs to the left (E) through a pleasant, somewhat English-looking district of woodlands, pastures, and farms. Just beyond (21 M.) *Beloeil* we cross the *Richelieu* (*View) and reach (22 M.) *St. Hilaire*, the starting-point for an ascent of *Beloeil Mt.* (comp. p. 138), which here rises to the right of the line, though it first comes into view on our left front. *Otterburn Park*, on the *Richelieu*, at *St. Hilaire*, is a favourite picnic-ground. — The next point of interest is (35½ M.) *St. Hyacinthe* (*Yamaska*, \$2; U. S. Consul), a pretty little French-Canadian city of (1901) 9210 inhab., with a Roman Catholic cathedral and a large Dominican college. Its manufactures include leather, shoes, woollen goods, and milling machinery. The town was devastated by fire in 1903, but has been rebuilt. The *Quebec Southern Railway* runs hence to the N. to (36 M.) *Sorel* (p. 143) and to the S. to (29 M.) *Iberville*, (42 M.) *Henryville*, and (52 M.) *Noyan Junction*. — Beyond *St. Hyacinthe* station we cross the *Yamaska River*. The country traversed is now rather featureless, with a good deal of scrub-wood. *Yamaska Mt* is seen to the right, 12 M. distant. Beyond (48 M.) *Upton* we cross two small streams. 54 M. *Acton*; 66 M. *South Durham*.

At (76½ M.) *Richmond* (2057 inhab.; *St. Jacob's Hotel*, \$4½; Rail. Restaurant), in the 'Eastern Townships' (p. 47), with the *College of St. Francis* (110 students), our line diverges to the left (N.E.) from that to *Portland* (p. 25) and traverses a thinly-peopled district. 88½ M. *Danville*. Farther on we cross the *Nicolet*. From (108 M.) *Arthabaska* (U. S. Agent) a branch-line runs to the left (N.) to (35 M.) *Doucet's Landing* (p. 144), connected by ferry with (2 M.) *Three Rivers* (p. 139). 117 M. *Stanfold*; 123 M. *Somerset*, a local market, with a trade in lumber; 131 M. *Ste. Julie*. At (136 M.) *Lyster* (p. 140) we cross the *Bécancour*. 152 M. *St. Agapit*. At (164 M.) *Chaudière* (U. S. Com. Agent) we cross the *Chaudière*, a rushing stream which forms a waterfall, 130 ft. high, a little to the left (top visible from the railway; now marred by factories). The new bridge of the Grand Trunk Pacific Railway (see p. 307) is visible to the left. The heights of Quebec are now also seen on the same side, the various features in and near the city becoming more and more prominent as we proceed. The huge red *Château Frontenac Hotel* (p. 145) is very conspicuous.

From (173 M.) *Lévis* (p. 157) passengers are ferried (fare 3 c.) across the *St. Lawrence* to (174 M. *Quebec* (R. 30). Hotel-porters

meet the trains at Lévis and will take charge of the baggage-checks. Cabs and omnibuses meet the steamer on the Quebec side (p. 145).

d *Viâ the Canadian Northern Quebec Railway.*

195 M. CANADIAN NORTHERN QUEBEC RAILWAY in 10½ hrs. (fare \$ 4 50 in summer, \$ 4 90 in winter). This line runs to the N. of and more or less parallel with the Canadian Pacific Railway.

Montreal (Windsor St Station), see p. 125. The train hugs the bank of the St. Lawrence as far as (14 M.) *Charlemagne*, where it crosses the N. branch of the *Ottawa*. It then quits the river and bends inland. 21 M. *L'Assomption*; 24 M. *L'Épiphanie*, the junction of a short line to *St. Jacques*.

36 M. *Joliette* (*Victoria, Château Guilbault*), a small town with (1901) 4220 inhab., is a railway-junction of some importance.

FROM JOLIETTE TO HAWKESBURY, 67 M., railway in 6-6½ hrs. This line runs towards the S W, passing (26 M.) *New Glasgow*, to (33 M.) *St Jérôme Junction* (for *St Jérôme*; 3619 inhab.), where it crosses the Canadian Pacific Railway from Montreal to Noming (see p. 175). At (53 M.) *Lachute* (p. 175) we again cross the Can Pac Railway. The train now runs along the N. shore of the *Ottawa* to (66 M.) *Grenville* (495 inhab.) and (67 M.) *Hawkesbury* (p. 174).

Lines also run from Joliette to the N E to *St Félix de Valois* and *St. Gabriel de Brandon* (Mastigouche Ho., a resort of anglers), and to the S. to *Joliette Junction*, on the Canadian Pacific Railway (p. 139).

Beyond Joliette we continue to run towards the N.E. 54 M. *St Barthelemi*, 82 M. *St Boniface*. — 90 M. *Shawinigan Junction*, for a short branch-line to (5 M.) *Shawinigan Falls* (see p. 140). — 94 M. *Grand Mère* (*Laurentides Inn*, well spoken of; *Rail. Restaurant*), a small town on the *St Maurice*, with extensive water-power and large paper and pulp mills. Pop. (1901) 2511. — The railway then crosses the *St. Maurice* just below the *Grand Mère Falls* (view). At (98 M.) *Gorneau Junction* we intersect the C. P. R. line from Three Rivers to Grandes Piles (pp. 139, 140). 105 M. *St. Tite*; 113 M. *Ste. Thècle*; 121 M. *Lac au Sable*; 126 M. *Notre Dame des Anges*, 130 M. *Rousseau's Mill*. — 138 M. *Rivière à Pierre* and thence to —

195 M. *Quebec*, see p. 145.

e. *Viâ the St. Lawrence.*

180 M. STEAMERS of the *Richelieu & Ontario Navigation Co* leave their wharf near Bonsecours Market (Pl. E, F, 4) every evening at 7 p.m. in connection with the boat arriving from Kingston (R. 47), and reach Quebec next morning about 6.30 a.m. (fare \$ 4; berth 75c. or \$ 1, parlor-stateroom from \$ 2½. B. or S. 75c., D. \$ 1). There are no Sun. boats between the beginning of Oct. and the end of May. The long days and short nights of a Canadian summer enable the traveller by this route to see a good deal of the river scenery. The banks are usually flat and offer little of interest except the innumerable French villages, with the shining tin-sheathed spires and roofs of their churches and presbyteries. Near Quebec, however, the scenery is more picturesque. The names of a number of the towns and villages along this part of the St. Lawrence are of frequent occurrence in accounts of the campaigns of 1775-6 (comp., e.g., Vol. VI of *Kingsford's 'History of Canada'*).

Montreal, see p. 125. As we leave, we obtain a good view of the city and of the 'superb water-front with its long array of docks only surpassed by those of Liverpool' (*Howells*).

To the right lie *St. Helen's Island* (p. 136) and, the small *Ile Ronde*. On the S. bank, opposite *Hochelaga* (p. 139) lies *Longueuil* (p. 138), with its pier

7 M. (left) *Longue Pointe*, with Dominion Park (p. 126) and the extensive works of the American Locomotive & Machine Co.

7½ M. (right) *Boucherville*. The register of the parish-church contains an entry of the baptism of an Indian baby by Père Marquette on May 20th, 1668. The low marshy islands here are frequented for duck-shooting and sometimes cause disastrous inundations by damming up the ice descending the river.

8½ M. (left) *Pointe-aux-Trembles*, with a church dating from 1704.

14 M. (r.) *Varennés*, with mineral springs, a miracle-chapel, and a 'Calvaire', is frequented as a summering-place, and has a large modern church, with two towers and elaborate internal decorations. *Varennés*, which also possesses a commercial college and a convent, celebrated its 200th anniversary in 1893. Sir George Cartier (p. 179) and other well-known Canadian politicians were natives of *Varennés*. — (1) *Bout-de-l'Isle*, at the mouth of the N. branch of the *Ottawa* (*Rivière des Prairies*), which enters the St. Lawrence amid a group of low wooded islands.

15 M. (l.) *Repentigny*. — 22 M. (r) *Verchères*, with an old French wind-mill and a romantic legend. — 23 M. (l.) *St. Sulpice*. — 28 M. (r.) *Contrecoeur*. — 29 M. (l.) *Lavaltrie*. — 35 M. (l) *Lanoraie*.

43 M. (r.) *Sorel* (*Brunswick, Carlton, \$1½; U. S. Agent*), a small city of (1901) 7057 inhab., lies at the mouth of the *Richelieu* (pp. 14, 19, 47), carries on a considerable country-trade, and possesses several shipbuilding-yards and foundries. It is named from Capt. De Sorel of the Carignan-Salières Regiment (p. 129), who built a fort here in 1665. Good fishing and snipe-shooting are obtained in the neighbourhood. — Opposite lies *Berthier* (p. 139; ferry).

From *Sorel* the 'Shore Line' of the *Quebec Southern Railway* runs via (10 M.) *Yamaska* to (17 M.) *St. François du Lac*, the station for *Abenakis Springs* (*Hotel, \$2, bath 30 c.*), a summer-resort, much frequented by the *Montrealers*. It may also be reached by steamer up the *St. François* (see below) or by railway from *Montreal* (Bonaventure Station, 3-4 hrs.).

A steamer of the *Richelieu & Ontario Nav. Co.*, leaving *Montreal* on Tues & Frid. at 1 p.m. and *Sorel* at 5 p.m., ascends the *Richelieu River* from *Sorel* to *Chambly*, arriving at 7.30 a.m. on the following morning (through return-fare \$5 or \$6, incl. meals and berth). The river is narrow and the scenery picturesque. The boat lies to from 10.30 p.m. to 4 a.m. at *St. Marc*. *St. Hilaire* (see p. 138) is reached at 5 a.m. Beyond *Beloeil* is the *Beloeil Bridge*, an iron draw-bridge 1200 ft. long. — *Chambly*, see p. 19.

Beyond *Sorel* the St. Lawrence expands into *Lake St. Peter*, 25 M. long and 9 M. wide. The lake is shallow, but a deep channel has been dredged through it. Huge timber-rafts may be met here.

57 M. (r.) *St. François*, at the mouth of the river of that name. — 65 M. (l.) *Louiseville* (p. 139).

76 M. (r.) *Nicolet*† (Canada Hotel, \$1½), with (1901) 2225 inhab. and a large college (300 pupils), lies at the mouth of the river of its own name (p. 141). A new cathedral, a parish church, a convent, and a home for priests were all burned down in 1906. Nearly opposite is *Pointe du Lac*, at the lower end of Lake St. Peter.

88 M. (l.) *Three Rivers* (see p. 139) lies at the mouths of the *St. Maurice* and at the head of tide-water, about midway between Montreal and Quebec. Opposite lies *Doucet's Landing* (p. 140, ferry).

104 M. (l.) *Champlain*. — 109 M. (l.) *Batiscan* (p. 140), with two lighthouses. — 116 M. (l.) *Ste. Anne de la Perade*, with a large church. — 124 M. (r.) *St. Jean des Chaillons*. — 129 M. (l.) *Gron-dines*. — 137 M. (r.) *Lotbinière*. — 138 M. (l.) *Deschambault* (p. 140).

143 M. (l.) *Portneuf*. Opposite is *Point Platon*, near which is the residence of Sir H. G. Joly de Lotbinière. The river bends to the right and forms the *Richelieu Rapids*. The scenery improves, the *Laurentide Mts.* (p. 139) approaching the river on the left.

153 M. (l.) *Les Ecureuils*, near the mouth of the *Jacques Cartier River* (p. 140).

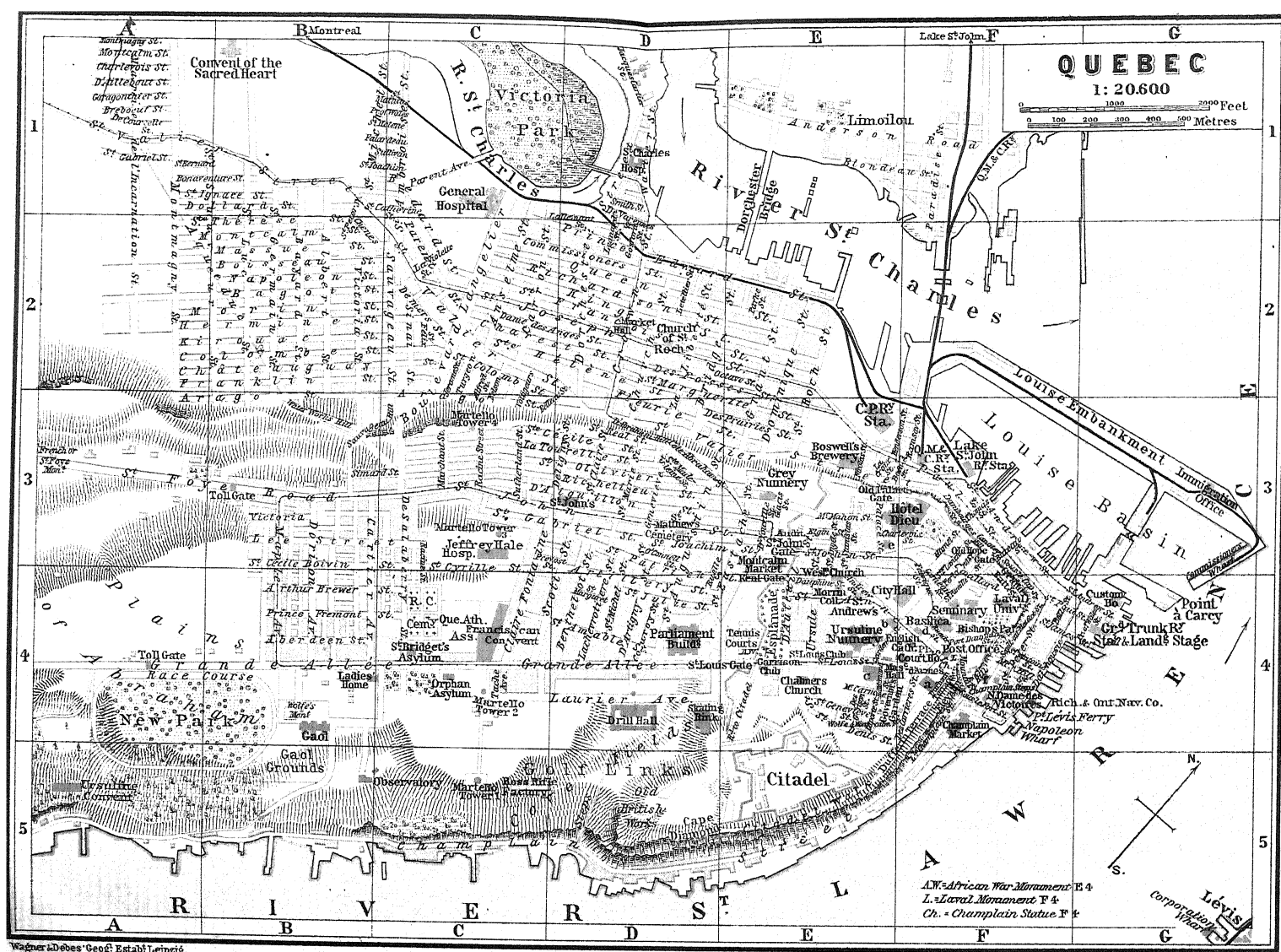
160 M. (l.) *Pointe aux Trembles*, a small village where many Quebec ladies took refuge during the siege of the city by Wolfe (1759) and were captured by his grenadiers (comp. *Sir J. M. Le Moine's* 'Tourist's Note-book').

167 M. (l.) *St. Augustin*. — 173 M. (l.) *Cap Rouge* (pronounced 'Carouge') lies at the mouth of the river whose valley forms the W. boundary of the Quebec plateau (comp. p. 157). Jacques Cartier wintered here in 1540-41, and Roberval made an unsuccessful attempt to establish a settlement here a few months later (see p. 147). About 1500 of Wolfe's troops descended with the tide from Cap Rouge to Wolfe's Cove on the morning of Sept. 13th, 1759 (p. 147). Nearly opposite is the mouth of the *Chaudière* (p. 141). The steamer here passes under the fine steel bridge of the Grand Trunk Pacific Railway (see p. 307).

Quebec now soon comes into sight, magnificently situated on a rocky plateau rising perpendicularly from the river. To the left, at *Sillery*, is *Wolfe's Cove* (p. 154), where the famous landing was effected in 1759. The cove may be identified from the steamer by the tall chimney standing at its mouth. The N. shore is lined with timber 'booms' and rafts. As we pass *Cape Diamond* we see, high up on the cliff, a large inscription indicating the spot, on the road below, where Montgomery fell (p. 148). Opposite is *Point Lévis* (p. 157).

180 M. *Quebec*, see p. 145.

† The final t is sounded by the French Canadians in proper names of this kind.



Wagner & Debes' Geogr. Estab^t Leipzig

30. Quebec.

Arrival. Travellers arriving by the lines on the North Bank (RR. 29a, 29d) run into the *Canadian Pacific Railway Station* (Pl. E, 3), on the N. side of the city. Passengers by the S. Shore Lines (RR. 29b, 29c) are ferried across from *Lévis* (p. 157) to the *Ferry Wharf* (Pl. F, 4). The St. Lawrence River Steamers (R. 29e) lie to at the *Champlain Market Wharf* (Pl. F, 4). These are in the lower part of the town, from which the upper town, with the hotels, etc., is reached by steep streets or flights of steps crossing the lines of fortification. *Hotel Omnibuses* (25 c.) and *Cabs* (see below) meet all the chief trains and steamers.

Hotels. *CHÂTEAU FRONTENAC (Pl. a; F, 4), a picturesque building on Dufferin Terrace, commanding beautiful views, and fitted up in a tasteful and homelike style, \$4-7 (reduced rates in winter; apt to be somewhat crowded in Aug.); NEW ST. LOUIS HOTEL (Pl. c; E, 4), 31 St. Louis St., near Dufferin Terrace, \$2½-4, VICTORIA (Pl. e; E, 3), Palace St., from \$2½; CLARENDON (Pl. b; E, 4), in a quiet situation at the corner of Garden and St. Anne Sts., \$2½-4, KING EDWARD HOTEL, 9 Desjardins or Garden St. (Pl. E, 4), \$1½-3, R. from \$1; BLANCHARD'S (Pl. f; F, 4), in the Lower Town, facing Notre Dame des Victoires (p. 155), \$1½-2 — **Boarding Houses** (\$7-10 a week). *Miss Jones*, 41 D'Auteuil St.; *Miss Bickell*, 3 St. Louis St.; *Miss Hill*, 40 Desjardins St.; *Mrs. Douglas*, 18 St. Anne St.; *Miss Tremaine*, 10 St. Ursule St.; *Mrs. Henchey*, 33 St. Anne St.; and many others. *Furnished Lodgings* are also obtainable.

Restaurants. At the hotels, *Auditorium*, 144 St. John St., cor. of Glacis St.; *Valquet*, Fabrique St.; *Club Vendôme*, 37 St. Joseph St., St. Roch. — *The Little Shop*, in the old Duke of Kent's House, 25 St. Louis St. (near St. Louis Hotel), for afternoon tea (old furniture, relics, woollens, etc., for sale).

Electric Tramways traverse the chief thoroughfares and pass all the principal buildings of the city. They form two complete circuits, one in the upper and one in the lower town, connected by transverse lines at Palace Hill and the Côte d'Abraham (Pl. D, 3). Fare 5 c., incl. transfer.

Carriages ('Wagons') with two horses, within the town, per drive, for ¼ hr., 1-2 pers. 50 c., 3-4 pers. 75 c., for ½ hr., 65 c., 75 c.; per hour \$1 and \$1¼. With one horse, 25 c., 40 c., 40 c., 60 c., 75 c., \$1. The *Calèche* (or calash) is a curious high two-wheeled vehicle for two persons, with the driver perched on a narrow ledge in front. For each trunk 10 c.; smaller articles free. Fare and a half between midnight and 4 a.m. Longer drives according to bargain. The drivers ('carters') urge the horses by the cry 'marche donc'. The best carriages are obtained in the Upper Town, the cheapest in the Lower Town.

Ferries ply every 10 min. (wharf, Pl. F, 4) to *Lévis* (fare 3 c. in summer, 10 c. in winter) and at frequent intervals to *Sillery* (p. 155; 10 c.), *St. Romuald* (p. 157), and the *Ile of Orleans* (p. 157).

Steamers run regularly from Quebec to *Montreal* (daily, at 5 30 p.m.; R. 29e.), to *Gaspé* (p. 91), *Charlottetown* (p. 8), *Summerside* (p. 100), and *Pictou* (p. 60); to the *Saguenay* (R. 33), to various small ports on the St. Lawrence; to *Liverpool*, *Glasgow*, and *Antwerp* (see R. 1), to *London*; to *Bermuda* and the *West Indies*, etc.

Shops. *Furriers* *Renfrew & Co.*, 35 Buade St.; *Paquet*, 165 St. Joseph St. — *Sporting and Fishing Gear*: *Chmic Hardware Co.*, cor. of St. Peter and Mountain Hill Sts.; *Young*, Bridge St. 111; *Shaw & Co.*, St. John and Sous-le-Fort Sts.; *J. P. Bertrand*, cor. of St. Joseph and Dorchester Sts.

Places of Amusement. *Auditorium* (Pl. E, 3), St. John St.; *Tara Hall*, 119 St. Anne St.; *Jacques Cartier Hall*, St. Roch.

An **Elevator** (3 c., Pl. F, 4) runs from Little Champlain St. (Lower Town) to Dufferin Terrace.

United States Consul, Mr. Wm. W. Henry, 66 St. Ursule St.

Post Office (Pl. F, 4), at the corner of Buade and Du Fort Sts. (8-4).

Probably the best general account of Quebec is 'Quebec under Two Flags', by A. G. Doughty and N. E. Dionne (\$2.50). Small guidebooks (25 c. each) are issued by E. T. D. Chambers and F. Carrel.

Clubs. *Garrison Club* (Pl. E, 4), 48 St. Louis St.; *St. Louis Club* (Pl. E, 4), nearly opposite the St. Louis Hotel (p. 145); *Quebec Riding Club*, Ste Foye Road, 1 M. from the Toll Gate (Pl. B, C, 3), for hunting, etc.

Quebec, superbly situated on a promontory formed by the confluence of the St. Lawrence and the *St. Charles*, is, perhaps, the most picturesque city in North America, appealing at once to the most blasé tourist by the striking boldness of its site, the romance of its history, and the extraordinary contrast of its old-world appearance and population with the new world around it. It is now also frequented in winter, for the sake of its winter scenery and sports.

It consists of a *Lower Town*, lying on the narrow strips of level land fringing the river banks, and of an *Upper Town*, perched on the top of a rocky bluff, rising almost vertically on both sides to a height of 200-350 ft. above the water. [The name 'Lower Town', however, does not technically include the large districts of *St. Roch* and *St. Sauveur*; comp. pp. 156, 157.] In shape the city is a triangle, bounded by the two rivers and the *Plains of Abraham* (p. 154). The older portion of the Upper Town is still surrounded by a massive wall, but the city has now spread considerably to the W. of the fortifications. At the S. angle of the wall, on the highest point of the plateau, is the famous *Citadel* (p. 149).

'Unexampled for picturesqueness and magnificence of position on the American continent, and for the romance of her historic associations, Quebec sits on her impregnable heights a queen among the cities of the New World.

At her feet flows the noble St. Lawrence, the fit highway into a great empire, here narrowed to a couple of miles' breadth (really less than 1 M. — Editor), though lower down the waters widen to a score of miles, and at the gulf to a hundred. From the compression of the great river at this spot the city derives its name, the word signifying, in the native Indian tongue, the Strait. On the east of the city, along a richly fertile valley, flows the beautiful St. Charles, to join its waters with those of the great river. The mingled waters divide to enclasp the fair and fertile Isle of Orleans.

The city as seen from a distance rises stately and solemn, like a grand pile of monumental buildings. Clustering houses, tall, irregular, with high-pitched roofs, crowd the long line of shore and climb the rocky heights. Great piles of stone churches, colleges, and public buildings, crowned with gleaming minarets, rise above the mass of dwellings. The clear air permits the free use of tin for the roofs and spires, and the dark stone-work is relieved with gleaming light. Above all rise the long dark lines of one of the world's famous citadels, the Gibraltar of America'.

(*Charles Marshall.*)

Quebec, with 68,840 inhab., was the third city of the Dominion of Canada at the census of 1901, though now, doubtless, outstripped by Winnipeg (p. 245). Of its inhabitants nine-tenths are French and Roman Catholic. The chief business of the city is the exportation of timber (comp. p. 148), grain, and cattle. It is the port of entry of the Atlantic steamers in summer, and the landing-place of immigrants. Various manufactures are carried on in St. Roch. The streets, as a rule, are narrow and irregular, and the quaint houses resemble those of the older French provincial towns. The best shops are in St. Joseph St. and Crown St., in St. Roch, and in or near St. John St., Fabrique St., and Buade St., in the Upper Town.

History. In historic interest Quebec almost rivals Boston among the cities of the New World, and it excels the New England city in the fact that its historic sites are constantly in view and have not been obscured by later alterations. When Jacques Cartier (see p 128) ascended the St. Lawrence in 1535 he found the Indian town of *Stadacona* occupying part of the present site of Quebec, and spent the winter in huts erected near the Dorchester Bridge (Pl. E, 1). On returning to France he carried with him the chief *Donnacoona*, who unfortunately died in Europe. On his second visit, in 1541, Cartier wintered at *Cap Rouge* (p. 144). An unsuccessful attempt at settlement was made by the *Seur de Roberval* in 1549. The real founder of Quebec was *Champlain* (p 129, comp. p 151), who in 1608 established a small post here, which gradually added agricultural settlers to the original fur-traders. In 1629 the little settlement was captured by *Sir David Kirke* (or *Kerk*), but it was restored to France three years later. In 1663 Quebec contained about 800 inhabitants. A little later (1690 and 1711) two unsuccessful attempts were made by English fleets to capture the city. In the first case *Sir William Phipps*, Governor of Massachusetts, was defied by *Governor Frontenac* and retired without doing serious damage. In 1711 the fleet under *Sir Hovenden Walker* was wrecked at Egg Island (p. 4; comp. p. 68).

In 1759, however, Quebec finally came into the possession of Great Britain through the daring of *General Wolfe* and a victory described by Major Wood (see below) as marking 'three of the mightiest epochs of modern times — the death of Greater France, the coming of age of Greater Britain, and the birth of the United States' † The British fleet, under *Adm. Saunders*, anchored off the *Island of Orleans* (p. 157) on June 28th. The French army under the *Marquis de Montcalm*, 13,000 strong, was encamped on the shore at *Beauport* (p. 158). *Gen. Monckton* seized the heights of Lévis and from them bombarded the city. On July 9th Wolfe established a camp at *Montmorency* (p. 159), and on July 31st he attacked the French lines, and was repulsed with heavy losses. A long delay then ensued owing to Wolfe's illness, but on the night of Sept. 12-13th the English troops, who had in the meantime been carried by the ships above Quebec, stole down the river in boats under cover of the darkness, effected a landing at the *Foulon* (now *Wolfe's Cove*) below *Sillery* (p. 155), scaled the apparently inaccessible cliffs, surprised and overpowered the French sentinels, and formed their line of battle on the *Plains of Abraham* (p. 154). Montcalm hastened across the St. Charles, and battle was joined by 10 a.m. (Sept 13th). Both leaders, as is well known, fell on the field, Wolfe dying on the spot (p. 154), while Montcalm, mortally wounded, was carried into Quebec (p. 154). The British were successful after a short struggle, the French troops retreated, and the city surrendered on Sept. 18th. According to the official reports the numbers actually engaged were 3110 British (including 200 left at the *Anse au Foulon* or *Wolfe's Cove*) and 5000 French, the latter number including Indians. The following spring *Gen. Murray*, left in command at Quebec, was defeated on the Plains of Abraham by a French army of 10,000 men under *De Lévis* and was besieged behind the city-walls until relieved by an English fleet on May 15th. Comp. *Parkman's* 'Wolfe and Montcalm', the *Abbé Casgrain's* 'Montcalm et Lévis', Vol IV of *Kingsford's* 'History of Canada', *Dr. James Douglas's* 'Old France in the New World' (1905), *Dr. A. G. Doughty's* 'Siege of Quebec' (6 vols.), and *Major William Wood's* 'The Fight for Canada' (5th, definitive ed., 1905; Amer. ed., 1906).

In 1775 *Gen. Benedict Arnold* made his famous march through the *Chaudière Valley* (p. 21) and reached the Heights of Abraham by the way Wolfe had pointed out (Nov. 14th). On Dec. 1st he was joined by *Gen. Montgomery*, who took the command; and on Dec. 31st the Americans

† Major Wood points out in a very interesting and convincing manner how largely this victory depended on the naval power of Great Britain, Wolfe's army being 'nothing else but a great landing-party'. The tradition that Wolfe recited Gray's 'Elegy' as the boats dropped down the stream is wrong. He recited the Elegy while reconnoitring from a boat, on the afternoon before, adding, 'Gentlemen, I would rather have written that poem than beat the French to-morrow'.

made a determined but vain attempt to take the city, Montgomery falling before a barricade in Champlain St. (spot now marked by a Lenz tablet). Comp. Vol. VI. of *Kingsford's History of Canada*

Since then the history of Quebec has been comparatively uneventful, though it has been visited by many destructive conflagrations and by several severe epidemics of cholera. For some years it was the capital of United Canada (p. xxii), and in the old Parliament House here, in 1864, took place the famous Confederation Debate, following the congress at Charlottetown (p. 99). The progress of Quebec has been by no means so rapid as that of other large Canadian and American towns, its population rising slowly from 42,052 in 1852 to 62,446 in 1881, since which it has been nearly stationary.

The 'Royal William', the first vessel to cross the Atlantic wholly under steam (1833), was built at Quebec in 1831.

The Province of Quebec has an area of 347,350 sq. M. (about thrice that of the British Isles), with an extreme length of 1000 M. and an extreme width of 800 M. In shape it is roughly triangular, the base abutting to the S.W. on Ontario while the apex extends to the N.E. to the Strait of Belle Isle. On the E. it is bounded by New England and New Brunswick, while to the N. and N.E. it marches with Ungava and Labrador. The St. Lawrence divides it into two very unequal parts, the portion cut off to the S.E. of the river being only about 50,000 sq. M. in extent. The most fertile part of the province is the plain of the St. Lawrence, of which 10,000 sq. M. are within Quebec, and the ordinary cereals and roots, hay, apples, plums, and various other crops are successfully cultivated. To the N. extends the huge and rocky Laurentian plateau, with its vast forests and innumerable lakes. To the S.E. of the St. Lawrence is the extension of the Appalachian system known as the Notre Dame Range, presenting an undulating surface and comprising much land suitable for agriculture or cattle-raising. Agriculture is the chief occupation of the population, and the lumber-business is also important. The province contains no coal, but asbestos, phosphates of lime, copper, gold, iron, and other metals are obtained in larger or smaller quantities. Fishing is carried on in the Gulf and Estuary of St. Lawrence. The manufactures of the province, which are steadily increasing in importance, include leather, cloth, cotton and woollen goods, iron and hardware, sugar, chemicals, soap, etc. In 1901 their total value was \$152,611,142. The trade of Quebec, owing to its position on the St. Lawrence, is very important. Other large navigable streams are the Ottawa, the Richelieu, the St. Maurice, and the Saguenay. In 1901 Quebec contained 1,648,898 inhab., about four-fifths of whom were French. — Quebec was originally settled by the French (comp. pp. 129, 147, 50), and it was not till after the American Revolution that any large number of British colonists established themselves here (comp. p. 47). At the time of the British conquest (1763) the name of Quebec extended to the whole of Canada or New France, outside of the Acadian provinces; but in 1791 it was divided into the two provinces of Upper and Lower Canada (comp. p. 192). These were re-united, as the Province of Canada, in 1841, and in 1867, on the establishment of Confederation, the province of Quebec assumed its present name and form. Perhaps the most notable fact in the later history of the province has been the extraordinary increase of the French Canadians, who did not number more than 70,000 at the cession of Canada. Large numbers of them have migrated to New England.

The stranger in Quebec should undoubtedly begin his visit with a walk round the walls and the view from Dufferin Terrace.

***Dufferin Terrace** (Pl. E, F, 5, 4) consists of a huge wooden platform, $\frac{1}{4}$ M. long and 50-70 ft. wide, erected on the edge of the cliffs on the S.E. side of the city, 185 ft. above the Lower Town and the St. Lawrence. The site was levelled and the first platform was erected by the Earl of Durham, but the Terrace was rebuilt and enlarged in the governorship of the Earl of Dufferin and opened to the public in

1879 by the Marquis of Lorne and the Princess Louise. The N. end, however, is still sometimes called the *Durham Terrace*. On the Terrace are five kiosques and a band-stand (frequent concerts). At its N. end, adjoining the Château Frontenac (p. 150), is a *Statue of Champlain* (Pl. Ch., F4; 1567-1635), by Paul Chevré, unveiled in 1893. The S. end of the Terrace is railed off as dangerous, a disastrous landslide having occurred here in 1889. On the W. Dufferin Terrace is adjoined by the GOVERNOR'S GARDEN (Pl. E, F, 4), with the *Wolfe and Montcalm Monument* (1827), bearing the neat epigrammatic Latin inscription:

Mortem Virtus Communem
Famam Historia
Monumentum Posteritas
Dedit

The *View from Dufferin Terrace is superb. At our feet are the winding streets of the Lower Town, including Champlain St., where Montgomery fell (p. 148). Beyond is the noble *St. Lawrence*, here about 1 M. wide, with its fleets of trading vessels and steamers, its wharves and docks, its timber-rafts and 'coves'. On the opposite side rise the heights of *Lévis* (p. 157), with three huge forts (that to the right alone distinctly visible) and its conspicuous churches and convents. Looking towards the left (N.E.), we see the confluence of the *St. Lawrence* and the *St. Charles* and the fertile *Isle d'Orléans* (p. 157). Several villages are visible along the banks of the *St. Lawrence*, with *Cap Tourmente* (p. 167) looming dimly in the distance (35 M.). A cloud of mist marks the site of the *Montmorency Falls* (p. 159). Behind these (to the N.) rise the *Laurentide Mts.* (p. 133). Immediately to the N. of the Terrace are the *Post Office* and *Laval University*. Among the most conspicuous buildings in the Lower Town are *Champlain Market* (p. 156), immediately at our feet, the church of *Notre Dame des Victoires* (p. 155), just to the N., and the *Custom House* (p. 156), at the mouth of the *St. Charles*.

This view should be seen, not only by daylight, but in the dusk and also after the city lights are lit.

The *Elevator* mentioned at p. 145 adjoins the N. end of the Terrace.

From the S. end of Dufferin Terrace the new *Citadel Walk* (Pl. E, 5, fine views), constructed in 1900, leads round Cape Diamond (p. 144), below the walls of the Citadel, to the Cove Fields.

In winter a toboggan-slide is erected, reaching from the King's Bastion to the other end of Dufferin Terrace.

At the S. end of Dufferin Terrace, adjoining *Cape Diamond*, the highest point of the plateau (350 ft.), stands the *Citadel* (Pl. E, 4, 5), a strong fortification, covering 40 acres of ground and dating in its present form from 1823. It is entered by a road diverging from *St. Louis St.* at *St. Louis Gate* (see Pl. E, 4), ascending across the glacis to the *Chain Gate*, and then leading along the trenches. It may be reached from the S. end of Dufferin Terrace by paths ascending across the green glacis and steps descending to the moat through a redoubt. No order of admission is now required, but at the *Dalhousie Gate*, leading from the moat to the inner works, the visitor is met by a soldier to act as guide (fee discretionary).

The present Fortifications of Quebec were constructed in 1823-32 and followed to some extent the lines of the French works of 1716. The earlier works enclosed a much smaller area. In the French period there were apparently three *City Gates*, one of which, the *St. Louis Gate*, is now represented by a modern structure, while the *St. John* and *Palais Gates* have been entirely swept away. The *Hope* and *Prescott Gates* were added by the English, but no longer exist. *Kent Gate*, to which Queen Victoria con-

tributed, is wholly modern. See also below. The Citadel and other fortifications of Quebec, being by no means equal to the demands of modern warfare, were reinforced some years ago by the erection of three detached forts at Lévis (p. 157). Those in turn were recognized as inadequate, and two new and powerful forts are being constructed at Beaumont (p. 166), 9 M. below the city, to command the channel of the St. Lawrence.

Since the withdrawal of the British troops in 1871 the Citadel has been garrisoned by Canadian troops. It encloses a large parade and drill ground, surrounded by barracks and magazines under the walls. Numerous heavy guns are mounted on the ramparts. In the centre is a diminutive cannon captured at Bunker Hill (1775). The large stone building is the *Officers' Quarters*, at the E. end of which, overlooking the river, is the *Governor-General's Residence*, usually occupied by him for short visits every year. The *W. Ramparts* overlook the Plains of Abraham (p. 154), and the *View from the King's Bastion*, at the N.E. angle of the ramparts, rivals that from Dufferin Terrace.

We now return to the *St. Louis Gate* (Pl. E, 4), a handsome structure in a mediæval style erected on the site of the old gate in 1878-9, ascend the steps, and begin here our circuit of the *Walls* (3 M.). About 15 yds. to the S. of the gate (inside) is a tablet marking the grave of Montgomery's companions (p. 147). To the right, within the walls, lies the *ESPLANADE* (Pl. E, 4), with a few mortars and dismounted cannon and a *South African War Monument* (Pl. A.W; E, 4), by McCarthy. To the left rises the large new *Parliament Building* (p. 153). In about 4 min. we reach the *Kent Gate* (Pl. E, 4), a Norman structure erected in 1879 to relieve the pressure of traffic (see p. 149). It was named in honour of the Duke of Kent, father of Queen Victoria, who lived in Quebec from 1791 to 1794. To the left is the *Montcalm Market* (Pl. E, 3), to the right the *Church of the Congregation*, one of the oldest in the city. We now obtain a view, in front, of the St. Charles River and the Laurentide Mts. The *St. John Gate* (Pl. E, 3), erected in 1867 on the site of one of the original French gates, was removed in 1897 to make way for the electric tramway. Beyond its site we have to leave the walls for a space, this angle of the fortifications being occupied for Government purposes. We regain the line of the walls at *Palace St.*, where we cross the gap left by the removal of the old *Palace Gate* (Pl. E, 3; see p. 149) and have the huge mass of the *Hôtel Dieu* (p. 152) to the right. As we proceed we overlook the quaint Lower Town, with its narrow streets and numerous factories. *Famille St.* marks the site of the old *Hope Gate* (Pl. F, 3, see p. 149). A little farther on (about 1/4 hr.'s walk from St. John's Gate) we reach the **Grand Battery* (Pl. F, 4) at the N.E. angle of the walls, on the cliff named *Sault-au-Matelot*, another fine point of view, overlooking the Docks and the confluence of the rivers. Behind us, at this point, are the solid buildings of *Laval University* (p. 152). Our course now leads towards the S. to *Dufferin Terrace* and the *Citadel* (see p. 149). The *Prescott Gate* (p. 149) was at Mountain Hill St. (Pl. F, 4).

At the N. end of Dufferin Terrace stands the **Château Frontenac Hotel* (p. 145), a large and handsome structure, erected in 1893 in the French Baronial style, from the designs of *Bruce Price*,

and consisting mainly of light-red brick, with copper roofs. It occupies the approximate site of the old French *Fort St. Louis*, built by Champlain in 1620 and burned down in 1834, a stone from which, bearing a Maltese cross, has been immured above the main entrance. The walls of the dining-room are hung with good tapestry, representing the foundation of Rome; and the other interior decorations are also in excellent taste. This fine hotel faces the *PLACE D'ARMES* (Pl. F. 4), the parade-ground and fashionable promenade of the French period. On the W. side of the Place is the *Anglican Cathedral* (Pl. F. 4), a plain edifice of 1804, with a spire 150 ft. high. It contains communion-plate given by George III, the colours of the 69th Regiment, and mural memorials to *Bishop Mountain*, first incumbent of the see, the *Duke of Richmond* (d. 1819), Governor-General of Canada (buried below the altar), and others. Adjacent are the *Rectory* and the *Chapel of All Saints*. To the S. of the Cathedral, at the corner of St. Louis St., is the handsome *Court House* (Pl. F. 4).

The short *Du Fort St* leads to the N. from the Place d'Armes to the *Post Office* (Pl. F. 4; p. 145), a substantial stone building at the corner of Buade St., erected in 1873.

The Post Office occupies the site of the old *Chien d'Or Building*; and a stone from the old building, bearing the carved and gilded figure of a dog, has been built into the front-wall. Below is the inscription:

'Je suis un chien qui ronge l'os
En le rongeant je prends mon repos
Un temps viendra qui n'est pas venu
Que je mordrai qui m'aura mordu.'

The story goes that the house belonged to a rich merchant named *Philibert*, who had been wronged by *Intendant Bigot* (see p. 156) and chose this way of expressing his hatred. Philibert was afterwards killed by an officer quartered on the Chien d'Or by Bigot, but was revenged by his son, who slew his father's murderer in Pondicherry many years later. Comp. 'The Golden Dog', a historical novel by W. Kirby. Dr Doughty has, however, shown, in his 'Quebec under Two Flags' (p. 145), that this version of the story is not quite accurate. At a later date the house was occupied as an inn by *Sergeant Miles Prentice*, whose pretty niece, *Miss Simpson*, so captivated *Commander Horatio Nelson* of H. M. S. 'Albemarle' in 1782, that the future hero of Trafalgar had to be spirited away by his friends to prevent him marrying her.

In front of the Post Office is a new *Monument to Bishop Laval* (Pl. L., F 4, p. 152), by Hébert, to be completed in 1908.

Following Buade St. towards the left, we pass the *Archbishop's Palace* and the *Basilica* (Pl. F. 4) or *Roman Catholic Cathedral*, founded in 1666 but dating in its present form from the second half of the 18th century. It occupies in part the site of the *Chapelle de la Recouvrance*, built by Champlain in 1633.

The interior is gay with white paint and gilding. Among the numerous paintings are a *Crucifixion, by *Van Dyck* (on the first pillar on the N. side of the nave, next the choir); a St. Paul, by *Carlo Maratti* (in the choir); and examples of *Restout*, *Blanchard*, *Vignon*, and *Plamondon*. The high-altar-piece is apparently a copy of *Lebrun*. The bishops of Quebec, including Laval, and four French governors, including Frontenac, are commemorated by tablets. The collection of vestments may be seen on application to the vergier. The red hat of *Card. Taschereau* (d. 1898) hangs from the roof, in front of the chancel.

According to the most recent investigations the *Chapelle de Champlain*, built in 1636 over the tomb of the hero, lay in the *Cimetière de la Montagne*, to the E. of the Basilica, below the site of the old Prescott Gate.

Opposite the front of the Basilica is the **City Hall** (Pl. E, F, 4), an imposing building, 200 ft. long, erected in 1894-95. It occupies the site of a Jesuits' College, founded in 1637. One of its fine rooms contains a collection of portraits of distinguished Canadians.

To the N. of the Basilica extend the huge buildings of the '**Seminary of Quebec** and '**Laval University** (Pl. F, 4).

The Seminary of Quebec was founded in 1663 by *François de Montmorency Laval*, first Bishop of Quebec, and the picturesque group of buildings composing it date from 1666 to 1830. It is divided into *Le Grand Séminaire*, for the education of priests, and *Le Petit Séminaire*, for the general education of boys. In 1852 the Seminary founded the *University of Laval*, which received a royal charter the same year and one from Pope Pius IX. in 1876. It possesses Faculties of Arts, Theology, Law, and Medicine. The Seminary is attended by 500, the University by 300 students. The main entrance to the University is at the Grand Battery (p. 150), but it is also reached from the Seminary through the *Theological Hall and Priests' Dwellings*. For the Laval University buildings at Montreal, see p. 188.

The University, which contains many objects of interest, is open to visitors daily, Sun. and holidays excepted (fee 25 c; Thurs., 1-4, 10 c.) The **PICTURE GALLERY** (catalogue provided) is, perhaps, the most important in Canada, and contains works by or ascribed to *Van Dyck* (No. 74), *Teniers* (90, 91), *Tintoretto* (20), *Salvator Rosa* (48, 116, 117), *Vernet* (128), *Albani* (103), *Honthorst* (49-53), *Parrocel* (97, 98), *Romanelli* (11), *Simon Vouet* (12), *Boucher* (104, 105, 110), *L. Carracci* (29), *Pierson* (89 Portrait of Calvin), *Schalscken* (80), *Oppe* (78), *Paul Bril* (94), *A. van Ostade* (131), and *Domenichino* (120). In the **LECTURE HALL** are works by *Maratta* (4), *N. Poussin* (10), *Baroccio* (22), and *Skidone* (29), and in the **FIRST ANTEROOM** is a landscape by *Gainsborough* (11). — The **RECEPTION HALL** contains interesting portraits (Bishop Laval, Queen Victoria, etc.) and other pictures. — The **MINERALOGICAL AND GEOLOGICAL MUSEUM** illustrates the mineral resources of the Dominion and includes a good collection of Canadian and foreign marbles. — The **ETHNOLOGICAL MUSEUM** includes an interesting series of Indian skulls. — The **COLLECTIONS OF NATURAL HISTORY, SCIENTIFIC INSTRUMENTS, AND COINS** also repay inspection. — The **MUSEUM OF RELIGION** contains the tomb and fragments of the coffin of Bishop Laval (see above), autographs of Louis XIV. and Colbert, and other souvenirs. — The ***LIBRARY**, with 150,000 vols., is very rich in works relating to Canada. Among its rarities are works given by Queen Victoria and a Book of Hours with the signature of Mary, Queen of Scots. — The **PROMOTION HALL**, in which the graduation-ceremonies take place, can seat 1500 people. — The **SEMINARY CHAPEL** contains an Ascension by *Philippe de Champaigne*, a modern Roman mosaic (after Titian's '*Mater Dolorosa*'), presented by Pope Leo XIII., and some relics of San Carlo Borromeo.

The American officers taken prisoner in the siege of 1775 (p. 147) were confined in *Le Petit Séminaire*.

Another of the great Roman Catholic institutions of Quebec is the large ***Hôtel Dieu Convent and Hospital** (Pl. E, F, 3), the imposing buildings of which are seen a little to the W. (entr. in Palace St.). It was founded by the Duchess d'Aiguillon, niece of Card. Richelieu, who placed it under the charge of the Hospitalières nuns. The buildings date from 1654 to 1762, and have been lately extended.

The *Convent Church* (entered from Charlevoix St.) contains a praying Monk by *Zurbaran*, a St. Bruno by *Eustache Le Sueur*, and other paintings. Good singing at the Sun. services. — Among the relics of the convent are a silver bust enshrining the skull of *Jean de Brebeuf*, a Jesuit missionary

tortured to death by the Iroquois in 1649, and the bones of his fellow-martyr *Lalemant* (comp. *Parkman's* 'Jesuits in North America').

On a house at the corner of Palace St. and St. John St. (Pl. E, 3) is a wooden figure of *General Wolfe*, erected a few years ago in place of one dating from 1771. The old effigy is now in the reading-room of the Literary & Historical Society (see below). — We may now follow St. John St to St Stanislas St. and proceed to the left to the handsome *Methodist Church* (Pl. E, 3, 4). — At the corner of St. Stanislas St. and Dauphin St. is **Morrin College** (Pl. E, 4), a small Protestant institution, affiliated to McGill University (p. 135).

This college was originally used as a prison, and the old cells are still shown in the N. wing. — Morrin College is also the home of the '*Library of the Quebec Literary and Historical Society*, containing a valuable collection of books relating to Canada (25,000 vols.).

Descending St. Anne St. towards the E. and turning to the right into Garden or Des Jardins St., we reach the '**Ursuline Convent**' (Pl. E, 4, visitors admitted in summer to parlours and chapel, 9-11 and 1-3.30). The convent was founded in 1639 by Mme. de la Peltrie and Marie de l'Incarnation, the 'St. Theresa of the New World'. The present buildings, which, with the enclosed gardens, cover seven acres of ground, date from 1686.

The chapel (rebuilt in 1902) contains paintings by *Philippe de Champaigne*, *Restout*, *Prudhomme*, and other French artists, and two beautiful ivory crucifixes. *Montcalm* (p. 154) is buried here, in a grave made by a shell which burst in the chapel during the bombardment of 1759. His skull is preserved under glass. The shrines contain bones from the Roman Catacombs. Before the statue of the Virgin burns a votive lamp which has not been extinguished since it was given by Madeleine de Repentigny in 1717. The present jewelled holder was sent from France in 1903 by descendants of the Repentigny family. Specimens of embroidery and painting by the nuns may be obtained in the reception-rooms.

No. 65 St. Anne St., overlooking the Ursuline Convent Garden, is the house where Mr. Howells lived while collecting material for '*A Chance Acquaintance*'. Comp chap iv. of that charming volume

The short Donnacona St. leads back to St. Louis STREET (Pl. E, 4), which we now follow to the right (W.), past the *Garrison Club* (Pl. E, 4). *Montgomery* (p. 147) was laid out in the house formerly on the site of No. 72 (on the right). We soon reach the *St. Louis Gate* (p. 149), just outside which, to the right, in a commanding situation, 280 ft. above the St. Lawrence, stand the **Parliament and Departmental Buildings** (Pl. D, 4), an imposing French Renaissance edifice in grey stone, erected in 1878-92. The central tower is 160 ft. high.

The bronze group in front of the building, the statues in niches on the façade, and the groups on the roof are the work of the talented native sculptor *Hébert*. *Maisonneuve* (p. 129), *Cartier* (p. 123), and *Champlain* (p. 147) are commemorated in conspicuous inscriptions.

The Interior is handsomely fitted up, with wooden panelling on the staircase bearing the coats-of-arms of distinguished French Canadian families (not always quite accurate). The rooms of the *Legislative Assembly* and the *Legislative Council* are spacious and convenient (public admitted to the galleries; reserved seats on application to the Speaker).

Visitors should ascend to the top of the tower, which affords a splendid **View of the city, the two rivers, etc. (comp pp. 149, 146).

To the left are the *Skating Rink* (Pl. D, 4) and *Drill Hall* (Pl. D, 4). In front of the last is a *Monument to Major Short and Sergeant Wallick* (Pl. D, 4), who perished in a gallant attempt to stem a conflagration in 1889. We now continue our walk along the *GRANDE ALLÉE* (Pl. A-D, 4), in order to visit the battlefield of 1759. The open ground behind the houses to the left, between the road and the edge of the cliff, is known as the *COVE FIELDS* (Pl. C, D, 4, 5) and is used by golfers. It is Government property. The remains of old fortifications traceable here are all of British origin, dating from 1783, 1804, and 1811. The two *Martello Towers* (Pl. C, 4, 5), at the W. end of the Cove Fields, date from about 1812. [There are other two towers to the N.; Pl. C, 3. The large building near Tower 1 is a *Rifle Factory* (Pl. C, 5).] A steep flight of steps descends from the Cove Fields to the prolongation of Champlain St. (p. 156). To the right is the *Franciscan Convent* (Pl. C, 4), erected in 1897, near which Montcalm's forces assembled on Sept. 13th, 1759; and on the same side lie the grounds and club-house of the *Quebec Amateur Athletic Association*. About $\frac{1}{3}$ M. beyond the Martello Towers is the *District Gaol* (Pl. B, 4), a large and massive building. To the N. of this (reached from the Grande Allée by the road to the left a little short of the toll-gate, about 1 M. from the St. Louis Gate) stands **Wolfe's Monument** (Pl. B, 4), a tall column rising from a square base and bearing the inscription: 'Here died Wolfe victorious, Sept. 13. 1759'. A little to the S.E. of the Gaol is the *Quebec Observatory* (Pl. B, C, 5).

To the W. of this point stretch the **Plains of Abraham** (Pl. A, B, 4, 5), so called after Abraham Martin, royal pilot of the St. Lawrence, who owned some ground in this vicinity about the middle of the 17th century. Wolfe's Cove (p. 144) is about $1\frac{1}{4}$ M. farther on, below the cliff. The *Racecourse* (Pl. A, B, 4, 5), which occupies part of the Plains, has been converted into a *Public Park*.

At the date of the battle the Plains stretched without fence or enclosure up to the walls of the town and to the Côte Ste. Genevieve. The surface was sprinkled with bushes, and the flanking woods were denser than at present, so affording more cover to the French and Indian marksmen. The position of the front of the French army at the opening of the battle (10 a.m.) may be indicated by a line drawn from Martello Tower No. 4 (Pl. C, 3) to the St. Lawrence. The British line was about $\frac{1}{4}$ M. farther to the W., where De Salaberry St. now runs (Pl. C, 3, 4). The French then advanced until within 40 paces of the British. Wolfe was at the head of the British right wing, near the St. Louis Road, and Montcalm at the head of the French centre. The battle was hotly contested for about $\frac{1}{4}$ hr., but the French troops, consisting largely of militiamen, gave way at last before the impetuous charge of the Louisbourg Grenadiers and 28th Regiment. Wolfe was hit three times, receiving his third and mortal wound at the moment he gave the order to advance. He fell about 250 yds. nearer Quebec than the Monument, the latter occupying the spot whither he was carried to breathe his last. Montcalm was first struck by a musket-ball and then by a discharge of the only field-piece the British had brought into action. He was carried into Quebec and died about four o'clock the next morning. Comp. pp. 153, 147.

The *Battle of Ste. Foye* or *Foy* (April 28th, 1760), in which Gen. Murray was defeated by the Chevalier de Lévis (see p. 147), took place to the N. of the Plains of Abraham; and the spot where the struggle was fiercest

is marked by the *Ste Foye Monument* (Pl. A, 3), erected in 1860 on the Ste. Foye road, about 1 M. from the St. John Gate and $\frac{3}{4}$ M. to the N.W. of the Wolfe Monument. It is inscribed: 'Aux Braves de 1760, érigé par la Société St. Jean Baptiste de Québec, 1860'. A visit to this point is easily combined with the excursion to the Wolfe Monument, by following the second cross-road to the right beyond the latter and returning to town by the Ste. Foye Road and St. John St. (a round in all of about 4 M.).

In *St. Matthew's Churchyard* (Pl. D, 3), in St. John St., is the tomb of *Thomas Scott*, brother of Sir Walter and for a time believed to be the author of 'Waverley'. — In St. Cyrille St., a little to the S. of the Ste Foye Road, is the new *Jeffrey Hale Hospital* (Pl. C, 3).

Following the Grande Allée for about $1\frac{1}{4}$ M. beyond the Wolfe Monument, we reach (left) the entrance to the beautiful grounds of ***Spencer Wood**, the residence of the Lieutenant-Governor of Quebec. The cliffs behind the house afford a splendid view, with Wolfe's Cove (p. 154) lying at our feet.

The grounds of Spencer Wood are adjoined on the W. by those of **Spencer Grange** (fine vineries), the home of *Sir J. M. Le Moine*, the author of numerous interesting works relating to Quebec and Canadian history.

Spencer Wood adjoins *Mt. Hermon Cemetery* (Prot.) and *St. Patrick's Cemetery*, beyond which, $3\frac{1}{2}$ M. from Quebec, is the village of *Sillery*, with its large convent, school-house, and timber-coves. We may return hence to the city by a small steamer (10 c.).

A pleasant afternoon stroll may be enjoyed by taking the steamer from Quebec to Sillery and following the shady road under the cliffs and along the river to (2 M.) Wolfe's Cove. Here we ascend the road to the left, bringing us out on the Grande Allée, just to the E. of Spencer Wood and less than 1 M. from the Wolfe Monument (p. 154). This walk affords fine views and has the historic interest of following the route of Wolfe's forces.

To visit the **Lower Town of Quebec**, we may follow *Mountain Hill St.* or *Côte de la Montagne* (Pl. F, 4) and descend to the right by the picturesque *Champlain* or *Breakneck Steps*, which lead to what is, perhaps, the quaintest and busiest part of the riverine districts. Hard by is the unpretentious church of **Notre Dame des Victoires** (Pl. F, 4), erected close to the site of Champlain's original *Habitation de Quebec* (1608; p. 147).

The name refers to the deliverance of the city from the English attacks of 1690 and 1711 (p. 147); and tablets on either side of the door (inside) bear the following inscriptions, which reflect a pleasant light on the magnanimity of the Government that overlooks them.

1688. *Pose de la 1ere Pierre par le Marquis de Denonville Gouverneur Innocent XI Pape. Louis XIV Roi de France L'église est dédiée a l'enfant Jésus.*

1690. *Défaite de l'amiral Phips. L'église prend le titre de Notre Dame de la Victoire*

1711. *Dispersion de la flotte de l'amiral Walker L'église prend le titre de N. D. des Victoires.*

1759. *Incendrée pendant le siège*

1765. *Rebâtie.*

1885. *Restaurée à l'occasion du 2ième Centenaire.*

Just to the S. of Notre Dame des Victoires is *Sous-le-Fort Street* (Pl. F, 4), recalling the narrow mediæval streets that survive in Bristol (e. g. the Pithay) and many Continental towns. *Sous-le-Fort St.* ends at the foot of the elevator leading to Dufferin Terrace (Pl. F, 4; see p. 149), whence *Little Champlain Street* (Pl. F, 4, 5), the

scene of Montgomery's death (p. 148), leads to the S. along the base of the cliffs. Between Little Champlain St. and the river stands the large **Champlain Market** (Pl. F, 4), near the wharves of the river-steamer. By continuing our walk towards the S (W.), through *Champlain Street* (Pl. C-E, 5), with a tablet (on the cliff) commemorating the 'Undaunted Fifty' who here repulsed the attack of Montgomery (pp. 147, 148), we may visit some of the large timber 'coves' that line the river farther up.

Moving in the opposite direction (N.) from Notre Dame des Victoires, we may follow the busy **ST. PETER STREET** (Pl. F, 4), with its shops, banks, and warehouses. Near the end of St. Peter St. *St. Andrew Street* (Pl. F, G, 4) leads to the right to the **Custom House** (Pl. G, 4), a Doric building, at the junction of the St. Lawrence and the St. Charles. To the N. of this point lies the capacious **Louise Basin** (Pl. F, G, 3), with a wet dock 40 acres in area and a tidal dock of half that size. On the *Louise Embankment* (Pl. F, G, 2, 3), forming the outer wall of the docks, is the *Immigration Office* (Pl. G, 3), with the barracks in which immigrants are cared for until they can be forwarded to their ultimate destinations. — *Sault-au-Matelot Street* (Pl. F, 4) and **Sous-le-Cap Street* (Pl. F, 3, 4), to the left of St. Peter St., below the walls, are two of the quaintest old streets in the city. A tablet in the former commemorates the Canadian force which here repulsed the attack of Arnold (pp. 147, 148).

ST. PAUL STREET (Pl. F, 3, 4), diverging to the left near the end of St. Peter St., leads to the W. between the cliff and the docks, passing near the stations of the *Lake St. John* (Pl. F, 3), the *Montmorency & Charlevoix* (Pl. F, 3), and the *C. P. Railway* (Pl. E, 3).

At the corner of *Nicolas Street* (leading to the left from St. Paul St.) and *St. Valer Street* is *Boswell's Brewery* (Pl. E, 3), on the site of the palace of Intendant Bigot, parts of the old walls of which may be seen in the court (plan at the Historical Society, p. 153).

The Intendant was the head of the civil administration of the French colony of Canada, as the Governor was of its military administration. Bigot, who was appointed Intendant in 1748, did much, by his profligacy, oppression, extravagance, and dishonesty, to ruin the resources of the colony and hasten its fall. Near the palace stood the so-called '*Friponne*' ('swindle'), a large storehouse erected by Bigot to hold the goods arriving from Bordeaux until sold to the King or the citizens. Comp. *Parkman's 'Montcalm and Wolfe'* (chap. xvii).

St. Paul St. is continued, beyond *St. Roch Street* (Pl. E, 2, 3), by **ST. JOSEPH STREET** (Pl. C-E, 2), forming the dividing line between the industrial ward of *St. Roch*, to the right, and the artisans' dwellings of the *Jacques Cartier Ward*, to the left. The former is supposed to occupy the site of Stadacona (p. 147; monument). The *Church of St. Roch* (Pl. D, 2) is a large but uninteresting edifice. On the banks of the St. Charles, which here makes an abrupt bend round *Hare Point*, are the *St. Charles Hospital* (Pl. D, 1) and the large *General Hospital* (Pl. C, 1). The latter occupies the site of the house of the Récollets, in which they received the

Jesuit missionaries in 1625. Close by, on a peninsula formed by a loop of the St. Charles River, is the *Victoria Park* (Pl. C, D, 1), with a monument to Queen Victoria by Marshal Wood. Beyond St. Roch is the district of *St. Sauveur*, with its imposing *Church*.

The chief points of interest in the Environs of Quebec are enumerated in the following route. A favourite drive leads round the plateau of Quebec (about 20 M.), going out to *Cap Rouge* (comp p 144) by the St. Louis Road and returning by the Ste. Foye Road.

From Quebec to *Montreal* see R. 29, to *Boston*, see R. 5, to *Portland*, see R. 9, to *Lake St. John*, see R. 32, to the *Saguenay*, see R. 33, to *Hah-far*, see R. 24.

31. Excursions from Quebec.

a. Lévis.

Ferry Steamers ply at intervals of about 10 min from the *Lévis Wharf* (Pl. F, 4), not far from the Champlain Market, to ($\frac{3}{4}$ M.) *Lévis* (5 min; fare 3c in summer, 10c. in winter).

Lévis or *Point Lévis* (*Kennebec, Terminus*, \$1-1 $\frac{1}{2}$, *U. S. Agent*), a city of (1901) 7783 inhab., is finely situated on the heights on the E. bank of the St. Lawrence, opposite Quebec, and should be visited, if for no other reason, on account of the grand ⁴View it affords of that city. It is the terminus of a branch of the Grand Trunk Railway and of the Quebec Central Railway (comp. pp. 141, 20), and it is also a station of the Intercolonial Railway (pp. 140, 83). The heights above the town are now occupied by three enormous forts of earthwork and masonry, erected some years ago at a cost of nearly \$1,000,000 each. So far, however, they have neither been armed nor garrisoned. The drive round these forts is interesting and affords a series of delightful views. Excellent views are also afforded by the electric cars, which run from the ferry to the market-place and also to St. Joseph and St. Romuald (see below). The *Lorne Graving Dock*, near the N. end of Lévis, is almost 500 ft. long and admits vessels drawing 25-26 ft. of water. Some of the *Churches* and *Colleges* are large and conspicuous buildings. — Lévis is adjoined on the N. by *Bienville* and *St. Joseph*, and on the S. by *South Quebec* and *St. Romuald* or *New Liverpool* (3589 inhab.), all sharing in the large lumber-trade of Quebec (direct ferry, see p. 145). The **Church of St. Romuald* is adorned with good paintings by *Lamprecht* of Munich.

The *Chaudière Falls* (see p. 141) are 4 M. to the S.W. of St. Romuald (cab \$1 $\frac{1}{2}$), but they have been sadly marred by the erection of mills. About halfway between St. Romuald and the falls we cross the Chaudière at a point called the 'Basin'. The sail to St. Romuald affords fine views of the bold shores of the St. Lawrence.

b. Isle of Orleans.

Steamers, starting from the *Champlain Wharf*, ply at frequent intervals to (4 M.) *Ste. Pétronille*, on the *Isle of Orleans* ($\frac{1}{2}$ hr; fare 10 c.).

About 4 M. below Quebec the St. Lawrence is divided into a N. and a S. channel by the *Island of Orleans* (*Isle d'Orléans*), 20 M. long, 5 M. wide, and 70 sq. M. in area. The short steamboat

voyage to it affords, perhaps, the best *View of the city of Quebec, while to the N. are seen *Beauport* (see below) and the *Montmorency Falls* (p. 159), backed by the *Laurentide Mts.* The Indian name of the island was *Minego*, and it was called *Isle de Bacchus* by Jacques Cartier (1535) on account of the numerous grape-vines he found on it Wolfe established part of his camp here during his siege of Quebec (p. 147). The island is occupied by about 4000 'habitants', who raise large crops of potatoes, make cheese, and possess fine orchards of apples and plums. The steamer calls at *Ste. Pétronille de Beauclieu*, a village of 220 inhab., with a pleasant little hotel (*Château Bel-Air*), a park, and other attractions, which draw many summer-visitors. On the N. shore of the island lie the hamlets of *St. Pierre* and *St. Famille*. on the S. shore those of *St. François*, *St. Jean*, and *St. Laurent*. *Miranda's Cave*, on the S. shore, is a favourite picnic-resort. The churches date mainly from the middle of last century, the *Nunnery of St. Famille* dates from 1685. Fine views are obtained of the *Laurentide Mts.* from the N. shore.

c. Falls of Montmorency and Ste. Anne de Beaupré.

21 M. RAILWAY (*Quebec Railway, Light, & Power Co.*) in 1 hr (return-fare to Montmorency 20 c., or, including the use of the elevator, 30 c.; to Ste. Anne 60 c.). This railway was originally intended mainly for the accommodation of pilgrims and pilgrimages, but is now also used largely by tourists. It lies between the road and the river. The service is now mainly electric, though there are also a few steam trains. This excursion, as far as the Montmorency Falls, is also often made by road (carr. there & back about \$3 for 1-2 persons), and thus both road and railway are described below. The pedestrian who understands French will find much to interest him throughout the *Cote de Beaupré*. The inns are primitive but clean. — Comp. 'A Chance Acquaintance', by *W. D. Howells*.

a. ROAD TO MONTMORENCY (6½ M.). We cross the *St. Charles* by the *Dorchester Bridge* (Pl. E, 1, 2), erected in 1789 and named after the then Governor-General of Canada. To the left is seen the *St. Charles Hospital* (p. 156). The road then turns to the right and runs parallel to the St. Lawrence. It is lined nearly all the way with the cottages of the 'habitants', generally standing askew to the road so as to present their gable-end to the E. wind. The visitor will notice the open-air ovens for baking bread, such as are common throughout French Canada. Behind the houses are the long narrow strips of their farm-lands (comp. p. 139), stretching on the right down to the river. Good views are enjoyed of Quebec, Lévis, and the Isle of Orleans. To the right lies *Maizerets*, a farm-house belonging to Quebec Seminary and forming the regular holiday-resort of the pupils. To the left, farther on, about 2 M. from Dorchester Bridge, is the large *Provincial Lunatic Asylum*. On the same side, ½ M. farther on, is a *Temperance Monument*. — 1 M. (r.) *Church and Presbytery of Beauport*. The church is a large edifice, the handsome towers of which have been rebuilt since a fire in 1888. Montcalm had his headquarters in 1759 at the manor-house of Beauport, one of the ruinous buildings seen to

the left, and at the *De Salaberry Manor*, since destroyed. Beauport is a long straggling village with about 1500 inhabitants.

About 3 M. beyond Beauport Church we reach the entrance to the *Kent House Hotel* (\$2-4, luncheon 75 c., D. \$1), which was built as *Haldimand House* by General Haldimand in 1780 and derives its present name from having been occupied by the Duke of Kent in 1791-94. It now belongs to the Quebec Railway, Light, & Power Co. and stands in pleasant grounds containing a rustic theatre, a deer-park, and a menagerie of Canadian wild animals (adm. 25 c., free to railway-passengers). The hotel commands a view of the falls, to which a direct path leads.

Beyond the Kent House Hotel the road crosses the *Montmorency River* and reaches *Bureau's Inn*, and the grounds on the E. side of the falls (entr. opposite the inn, "View of Quebec and its environs"). Adm. to the grounds round the falls 25 c. (free to railway passengers). An interesting collection of historical cannon may be seen from the road in the grounds of *Montmorency Cottage*, near the head of the falls.

The farm-house in which Wolfe lay ill for two weeks, and from which he wrote his celebrated despatch to Pitt on Sept. 2nd, 1759, is about $\frac{1}{3}$ M. beyond Bureau's and 200 yds. down to the right.

b. RAILWAY TO MONTMORENCY AND STE. ANNE (21 M.). On leaving Quebec the train crosses the *St. Charles* by a long swing-bridge (views) and stops at ($\frac{1}{2}$ M.) *Limoilou Junction*, for the village of *Hedleyville*. It then runs along the bank of the *St. Lawrence*, affording views of the Isle of Orleans (p. 157). $1\frac{1}{2}$ M. *Manxerets* (p. 158), 2 M. *Mastai*; $2\frac{1}{2}$ M. *Beauport* (p. 158); $3\frac{1}{2}$ M. *Beauport Church* (p. 158); $5\frac{3}{4}$ M. *St. Gregoire*. — $6\frac{1}{2}$ M. *Montmorency*, with the powerhouse of the railway, which also supplies power to the adjacent cotton-mills and light to Quebec. — The train now backs up to the ($6\frac{3}{4}$ M.) *Montmorency Falls Station*, whence an elevator (276 ft.) ascends to the road near the Kent House Hotel (see above).

The *Falls of Montmorency, known to old French peasants as *La Vache*, are formed by the Montmorency River just before its confluence with the St. Lawrence and are 265 ft high and 150 ft wide. In spring or after heavy rain they are very imposing. A good near view of the falls from above is obtained from a summer-house on the W. bank, built originally by Gen. Haldimand (see above), at the suggestion of the Baroness Riedesel, wife of the commander of the Hessian troops in the Revolutionary War (see her 'Letters'). Above the falls are the remains of a suspension-bridge, which fell in 1856, carrying with it a peasant and his wife who were driving across it at the time. Two fine ice-cones used to be formed at the foot of the falls in winter, affording royal sport to Quebec tobogganers, but there is now so little spray, owing to the fact that great part of the water is withdrawn to generate the electric light with which Quebec is illuminated, that the cones are insignificant.

The famous Natural Steps, 1 M. farther up the river, long formed an attraction scarcely second to the falls but were submerged in 1906 as a result of a dam constructed by the railway-company just below them. The scene recalled the Strid at Bolton Abbey or the Linn of Dee near Braemar (see Baedeker's *Great Britain*).

It was at Montmorency that Wolfe delivered his unsuccessful attempt on Montcalm in 1759 (see p. 147), the centre of the attack being the end of the road known then and now as the *Côte de Courville*.

The railway now crosses the *Montmorency River* (p. 159), affording a good view of the falls to the left. 7 M. *Little Village*. — 10 M. *L'Ange Gardien*, with its old church, prettily situated in a small valley, offers good snipe and partridge shooting. The hills approach more closely. — Near (15 M.) *Château Richer*, with its orchards and good shooting, are the romantic falls of the *Sault à la Puce*, about 110 ft. high. — 18½ M. *Rivière des Chiens*; 20½ M. *Eglise Ste Anne*, the nearest station for visitors to the church (see below).

21 M. *Ste. Anne de Beupré*, or *La Bonne Ste. Anne* (*Regina Hotel*, \$2, also several small inns), a village with about 2000 inhab., said to have been founded by Breton mariners about 1620, is the most famous place of pilgrimage in America to the N. of Mexico and is visited annually by many thousands of pilgrims (200,000 in 1905). The present *Church of Ste. Anne*, opened for public worship in 1876 and created a Basilica by the Pope in 1887, is a large and handsome building, with towers 168 ft. high. It contains some relics of Ste. Anne, numerous *ex voto* offerings and crutches left by those who have undergone miraculous cures, a statue of St. Anne (with the Virgin) on an onyx column, and a good altar-piece by *Le Brun*. The historical relics in the vestry are shown from 11 to 12. The enthusiasm is at its greatest height on Ste. Anne's Day (July 26th). The original church of 1658 (the eleventh church built in Canada), threatening to fall into ruin, was taken down in 1878 and re-erected with the same materials on its former site, near the new church. Opposite the *Presbytery*, at the E. end of the main church, is the brilliantly decorated *Scala Santa Chapel* (finished in 1893), the platform in front of which commands a superb *View. Miraculous healing powers are also ascribed to a neighbouring well.

The *Falls of Ste. Anne, formed by the river of that name, 3-4 M above the town, consist of a series of picturesque plunges, one of which is 130 ft. high. The path to the falls is not easily found without a guide. The *Seven Falls of St. Féréol*, 7 M farther on, are still more picturesque.

The *Ste. Anne Mts.*, a part of the Laurentide range, culminating in a summit 2635 ft. high rise about 5 M. from the village.

Beyond Ste. Anne the railway goes on to (2 M.) *Beaupré* and (4 M.) *St. Joachim*. About 5 M. farther on (30 M. from Quebec) is *Cap Tourmente* (p. 167; *View)

d. Lorette. Charlesbourg. Lake Beauport. Lake St. Charles.

Lorette is most quickly reached by railway (see p. 161), but the visitor of leisure is advised to drive, at least one way. *Charlesbourg* and *Château Bigot* may easily be combined in the same drive. The distance to Lorette, viâ either the Little River or the Charlesbourg road, is about 8 M. The fare to Lorette and back direct should not exceed 75c. to \$1.50 per head (with a minimum of \$1.50); and the détour to Château Bigot may cost about 50c. extra. The bridge-toll may be saved by hiring the carriage on the far side of the St. Charles.

The so-called '*Little River Road*' to Lorette begins at the end of the tramway-line in St. Sauveur, crosses *Scott's Bridge* (beyond Pl. A, 1), and follows the E. (N.) bank of the *St. Charles*. Or we may follow the W. (S.) bank for 2 M. more and then cross the river.

The *Charlesbourg Road* crosses the *Dorchester Bridge* (Pl. E, 1,2; p. 158) and runs towards the N. W. (the Montmorency road diverging to the right; see p. 158). To the left, near the confluence of the *Lauret* with the St. Charles, is the small *Jacques Cartier Monument*, marking the supposed spot of Cartier's settlement in the winter of 1535-36 (p. 147).

4 M. *Charlesbourg*, see below *Château Bigot* (see below) lies about 2 M. to the E. — Opposite the church the Lorette road turns to the left.

8 M. *Lorette*, see p. 162.

The road running on from *Charlesbourg* in the direction hitherto followed leads to (8 M.) *Lake Beauport* (*Hotel*; 12 M. from Quebec), a sheet of water 1 M. long and $1\frac{1}{4}$ - $1\frac{1}{2}$ M. wide, frequented by fishing and pleasure parties from Quebec. The road to it passes the village of *St. Pierre* and crosses the 'Brûlé', a district devastated by a forest-fire.

About 4 M. to the N of Lorette, and 12 M. from Quebec, lies *Lake St. Charles*, another popular angling-resort, 4 M. long and $\frac{1}{2}$ M. wide. Beyond Lorette the road to it crosses the *Bellevue Mt.* (view). *Lake St. Charles* is the source of Quebec's water-supply

32. From Quebec to Lake St. John and Chicoutimi.

253 M. QUEBEC & LAKE ST JOHN RAILWAY to (189 M.) *Roberval* in 8 hrs. (fare \$5.70, parlor-car 75 c., sleeper \$1.50); thence to (61 M.) *Chicoutimi* in $2\frac{1}{2}$ hrs. (through-fare \$6, parlor-car from Roberval 50 c., sleeper \$1.50). Luncheon is served at *Lake Edward* (p. 163), reached at 1.20 p.m.

This route, crossing the *Laurentian Mts* (p. xxxvi) and traversing one of the wildest and least-trodden districts yet reached by railway, may be combined with the Saguenay trip (E. 33). In this case the traveller is recommended to proceed to Roberval, pass one or more nights there, and then go on to Chicoutimi, where he joins the Saguenay steamer (p. 172). As the through-train to Roberval starts in the morning, while the steamer ascends the Saguenay by night and descends by day, he will thus see all the scenery by daylight. As at present arranged, he leaves Quebec by train at 8.45 a.m., reaching Roberval at 4.55 p.m.; leaves Roberval at 7.10 p.m., reaching Chicoutimi at 9.55 p.m.; and leaves Chicoutimi early the next morning (comp. p. 172). The fare for this 'round trip' is \$10, meals and berth on steamer extra. An objection raised by several travellers against the round trip is the uncomfortably early hour at which the steamer has to leave Chicoutimi (comp. p. 172). It may also be noted that between Lake St. Joseph (p. 162) and Kiskisink (p. 163) the beauty of the country on both sides of the railway has been sadly marred by forest-fires. It is hardly advisable to make the round trip in the opposite direction, as the steamer ascending the Saguenay passes the finest scenery by night — For the fishing at Roberval and other points on the Quebec & Lake St John Railway, see p. 164

Quebec, see p. 145. The train leaves the station in t. Andrew St (Pl. F, 3) and crosses the *St. Charles* by an iron bridge 1100 ft. long (retrospect of the city). — From ($\frac{1}{2}$ M.) *Limoilou Junction* (*Hedleyville*), at the other end of the bridge, the line to Montmorency and Ste. Anne diverges to the right (see p. 158).

Our line begins almost at once to mount the slopes of the *Laurentian* or *Laurentide Mts.* (pp. xxxvi, 139). The hills at first are seen mainly to the right. — 3 M. *Charlesbourg*, a prosperous village with (1901) 2512 inhab., surrounded by orchards, contains the

summer-homes of many Quebeckers. It lies high and commands a fine view. 6 M. *Charlesbourg West*.

About 2 M. to the E. of Charlesbourg are the scanty ruins of *Château Bigot* or the *Hermitage*, a country-seat of the Intendant Bigot (p. 156). 'The ruin itself is not of impressive size, and it is a château through grace of the popular fancy rather than through any right of its own' (*Howells*). The romantic and probably baseless legend of the Indian maiden Caroline, who is said to have been murdered here, Rosamond-like, by the jealous Mme. Péan, another favourite of Bigot, is given at length in 'The Golden Dog', by *W. Kirby*. See also 'L'Intendant Bigot', a French romance by *Joseph Marmette*. Researches made in 1897 seem to indicate that this château really belonged to Bigot's predecessor, Intendant Begon, to whom the ground was ceded by the Jesuits in 1716

9 M. *Indian* or *Jeune Lorette* (450 ft.), a pretty little village, occupied by about 300 Christianized survivors of the ancient Hurons, so crossed, however, by intermarriage with the French Canadians that there is probably not a single full-blooded Indian in the village. Comp. *Howells's* 'A Chance Acquaintance' (chap. xiii).

A visit to Indian Lorette, to which the Hurons were removed in 1697, is one of the favourite short excursions from Quebec (comp. p. 160). The Indians live by hunting and trapping, by acting as guides for sportsmen, and by making bead-work, baskets, snow-shoes, moccasins, and toboggans. Visitors are usually welcome at the houses of the Head Chief and his colleagues, of whom Tsioui ('Seewee') is the only Protestant. French is the language of the village, though a few of the Indians also speak English. The *Church*, a reproduction of the Santa Casa of Loretto, was erected 150 years ago and contains a copy of the Loretto figure of the Virgin.

The *St. Charles River* flows past the village, forming the romantic **Falls of Lorette* (ca. 100 ft.), a good view of which is obtained from the road. A steep and rough path also descends to the brink of the lower part of the cataract. — The river separates Lorette from the thriving French village of *St. Ambroise*, with (1901) 1555 inhab. and a large church. — Both villages afford good **Views of Quebec*.

17 M. *Valcartier*, largely settled by English military men, with about a score of Waterloo veterans in its graveyard. About 4 M. farther on we cross the *Jacques Cartier River* (p. 140; **View*, best to the right) and reach (18 M.) *St. Gabriel*. Snow-breaks are seen here and at intervals farther on. Beyond St. Gabriel we traverse a district overgrown by scrubby forest. 21 M. *St. Catharine's*. — 23 M. *Lake St. Joseph* (**Lake St. Joseph Hotel*, a large house much frequented in summer, \$3-4 per day, \$14-21 per week; *Lake View House*, \$1½-2, 2 M. from the station). The lake, of which we cross the outlet, is 8 M. long and lies to the right. It is navigated by a small steamer and affords good boating, bathing, and fishing for black bass, trout, and lake-trout (*touladi*). Regattas are held here in summer, and a delightful canoe or boat trip may be made up the *Rivière aux Pins*. The Lake St. Joseph Hotel is reached by a spur-line, with a private station. — Farther on we skirt the pretty **Lake Sergent* (r.). — 31 M. *Bourg Louis*.

34 M. *St. Raymond* (460 ft.; *Hotels*), a village with 1272 inhab., prettily situated on the *Ste. Anne River* and surrounded by mountains, is another good angling-centre. It is the station for the *Tourili*

Fish & Game Club. The scenery of the N. branch of the Ste. Anne, known as the *Little Saguenay*, is wild and picturesque.

The district now traversed contains few settlements except the modest little houses of the various fishing-clubs, which have acquired the fishing-rights of the innumerable lakes and streams with which the country abounds. Caribou and other shooting is also enjoyed here. — 57 M. *Rivière à Pierre* (710 ft.), a lumbering-settlement, is the junction of the Great Northern Railway of Canada (see p. 142).

We cross the *Rivière à Pierre* on leaving the station of that name, and about 10 M. farther on we reach the beautiful brown *Batiscan*, the left bank of which we now follow for about 30 M. The opposite bank of the river often rises in vertical rocky cliffs, hundreds of feet high, while the water flows past in alternate stretches of turmoil and placidity. The railway follows its windings, often rounding abrupt curves. 69 M. *Laurentides*, with an angling-club; 76 M. *Miguick*. — From (79 M.) *La Tuque Junction* a new branch-line runs to (40 M.) *La Tuque*, at the head of steamboat-navigation on the *St. Maurice River* (p. 140). This line skirts the N. shore of *Lake Wayagamak*. — Beyond (85 M.) *Beaudet* we cross and leave the *Batiscan*. 93 M. *Stadacona*, with a lake and club-house (left); 101 M. *Pearl Lake*, another good angling-station; 107 M. *Triton Club*, with an attractive club-house.

Within 5 M. or so of this part of the railway is the W. boundary of the *Laurentides National Park*, established by the Quebec Legislature in 1895 for objects similar to those aimed at in *Algonquin Park* (p. 204). Its area is 2640 sq. M. Admirable trout-fishing is afforded by the *Jacques Cartier Lake and River*; caribou abound in the famous hunting-ground known as the '*Great Barrens*'; there are also not a few moose; and good partridge (ruffed grouse) shooting is obtained in the S. part of the Park. The license-fee for fishing in the Park is \$10, plus \$1 per day (\$4 per day at *Jacques Cartier Lake*); the shooting-license is \$25, plus \$1 per day (\$2 in the '*Barrens*', with the use of a comfortable shooting-lodge). One bull moose and two caribou are allowed for each gun. A charge of \$1 a day is made for the use of canoes and camp-equipments. Guides (*Jos. Isabel, J. Filion, Beaulieu, Minguy, etc.*) charge \$1½ per day.

112 M. *Lake Edward* (1210 ft.; *Laurentides House*, meals 75 c., described as mediocre), or *Lac des Grandes Isles*, where the train halts for luncheon, is a large and fine body of water, 20 M. long and studded with countless islands. It is well stocked with fine trout, often 5 lbs. in weight, the fishing for which is free to all patrons of the railway. Excellent fishing is also obtained in the *Rivière aux Rats*, the *Jeanotte* (the lake's outlet), etc. Guides and camping-outfits may be obtained at the hotel. Small steamers ply on *Lake Edward*.

About 13 M. beyond *Lake Edward* the railway reaches its highest point (1500 ft. above the *St. Lawrence*) and begins to descend towards *Lake St. John*. — At (134 M.) *Kiskisink* (1320 ft.), a fine lake, 9 M. long, lies to the right. Close to the line is the club-house of the *Metabetchouan Club*. 150 M. *Commissioners Lake*. The small but picturesque lake to the left is *Lac Gros Visons*. — 160 M. *Lake*

Bouchette (1075 ft.), also to the left, is connected, on the W., with the *Lac des Commissaires*, and both waters are leased by a club of Connecticut anglers. — 163 M. *Dablon*; 164 M. *St. Francis de Sales*. Lake St. John (see below) now comes in sight on the left front.

At (176 M.) **Chambord Junction**, near the S. bank of Lake St. John, the railway divides into two branches, the one running to the left to (13 M.) *Roberval*, the other to the right to (51 M.) *Chicoutimi*. In the meantime, we follow the former branch, leaving the other to be described at p. 166.

The Roberval line skirts the S W. shore of Lake St. John, of which it affords fine views to the right. At (183 M.) *Ouâtchouan Falls* we cross the *Ouâtchouan* and obtain a good view of its falls, about 1 M. to the left (see p. 165). — About 5 M. farther on we cross the rapid *Ouâtchouaniche*, or *Little Ouâtchouan*, and reach —

189 M. **Roberval** (350 ft.), a prosperous lumbering-settlement, with 1250 inhab. and two or three saw-mills. The most conspicuous building is the grey stone *Nunnery*.

Beyond the village the train runs on for about 1 M. more to the platform in front of the ***Hotel Roberval** (\$ 3-5; 300 guests), a large and well-equipped summer-resort, with electric lights, billiard-room, bowling-alley, and other conveniences. It commands a fine view of Lake St. John, the opposite end of which, 25 M. distant, can be descried in clear weather only. The steamboat-wharf is about $\frac{1}{3}$ M. from the hotel.

Lake St. John, the *Pikouagami* or 'Flat Lake' of the Indians, is an almost circular sheet of water, with a diameter of about 25 M., surrounded by low wooded hills. It is well stocked with fish, including the ouananiche (see below), pike, doré, and trout. A number of rivers flow into the lake, the largest of which are the *Peribonka*, the *Mistassini*, and the *Ashouapmouchouan*. It empties at its E. end by the *Grand Discharge* or *Décharge du Lac St. Jean* (see below), forming the upper waters of the Saguenay. The Lake St. John Valley, now containing about 50,000 inhab., possesses a fertile clay soil, which produces good crops of wheat, oats, and potatoes, and raises considerable quantities of livestock. The valley is one of the leading districts in Quebec for cheese and butter. The climate is said to be not more severe than that of Montreal, and the snow-fall is rather less. The settlers are almost wholly French Canadians.

The **Fishing** in Lake St. John and its tributary rivers has been leased to the Management of the Hotel Roberval, and is free to all its patrons. The chief sport is afforded by the *Ouananiche* ('wahnaneesh'), a kind of freshwater salmon peculiar to this district, which ranks with trout and salmon in its gamy qualities. The usual weight is 2-4 lbs., and fish above 5-6 lbs. are rare, though they are sometimes caught weighing as much as 8 lbs. In May and June the ouananiche may be caught in the lake, especially near the Hotel Roberval and at the mouth of the *Metabetchouan* (p. 166); later the scene of the sport is at the *Grand Discharge* (p. 165) and up the rivers *Ashouapmouchouan*, *Mistassini*, and *Peribonka*. See 'The Ouananiche and its Canadian Environment', by E. T. D. Chambers. Fishing and camping outfits, including canoes, provisions, and two guides, are provided

at the hotel for \$7 a day for each person. Guides receive about \$1 $\frac{1}{4}$ -1 $\frac{1}{2}$ per day (incl. use of canoe) and 75 c. for their board. Fishing and shooting excursions up the Mistassini, etc., are often made in this way.

The favourite trip from the Hotel Roberval is that by steamer across Lake St. John to the Grand Discharge (25 M., in 2 hrs.; fare 75 c., return-fare \$1.25). [The steamer burns wood, and passengers should be on their guard against sparks from the funnel] — The general course of the steamer is a little to the N. of E. As we leave we enjoy a good retrospect of Roberval and a distant view (r.) of the *Ouatchouan Falls* (see below). The E. end of the lake, at the entrance of the Grand Discharge, is thickly sprinkled with the **Thousand Islands of the Saguenay**, at one of which, with the little fishing-hotel named the *Island House* (\$2), the steamer halts. Passengers who wish to fish or to make the canoe-trip to Chicoutimi (see below) remain here, while others return to Roberval in the afternoon. The Grand Discharge is on the N. side of the *Island of Alma*, while on its S. side, about 3 M. distant, is the *Little Discharge* (*Petite Décharge*). The two unite, forming the *River Saguenay* (p. 170), at the E. end of the island, which is 9 M. long.

An excursion by road (carr \$2-4) should also be made to the **Ouatchouan Falls* (comp. p. 164), which are about 280 ft. high and very picturesque. Walkers may follow the railway, which is well ballasted, to (7 M.) *Ouatchouan Falls Station* (p. 164) and there take to the road. A path, leaving the road to the right, just beyond the bridge over the *Ouatchouan* ('Weedtchouan'), leads through wood to (1 M.) the foot of the falls.

About 3 $\frac{1}{2}$ M. to the N. of the Hotel Roberval is the interesting Indian reservation of *Pointe Bleue*, inhabited by about 500 *Montagnais* (p. xlvii), who make their living mainly as guides, trappers, and canoe-men. They are very dark in colour and of much purer blood than the Lorette Indians (p. 162), and their village offers many points of interest. It includes a Roman Catholic church and mission-house, an Episcopal church, and a store of the Hudson Bay Co., with a stock of furs. — This drive may be extended to (8 M.) *St. Prime*, a prosperous farming settlement. The roads are not good, and the universal vehicle is the buckboard ('planche').

Among other points to which excursions are sometimes made from Roberval are the stations of the 'Eastern Extension' of the railway (from Chambord to Chicoutimi; see p. 166) and the Trappist settlement on the Mistassini, 20 M. from its mouth (accessible by steamer).

FROM THE ISLAND HOUSE TO CHICOUTIMI BY RIVER. This trip (ca. 45 M.), which is performed in one long day, with an early start, is recommended to travellers who can stand a little fatigue and are not too nervous for the shooting of the rapids. Ladies often make the descent. There are 8 or 9 portages, from 100 yds. to $\frac{3}{4}$ M. long. Each traveller requires a canoe with two guides, the charge for which, including allowances for the guides' board and their return-journey, is about \$10-12. To this the traveller's own board has to be added, and the last 10-12 M., from the *Grand Remou* to *Ste Anne de Saguenay* (p. 172; ferry thence), are generally accomplished by carriage (ca. \$2), so that the expenses of the trip may be put at about \$15-17. The scenery all along is striking and picturesque, while the 'running the rapids', which the dexterity of the canoe-men renders practically safe, is a novel and exciting element of interest. It is not necessary to take provisions, as inns are reached at convenient intervals.

The country to the N. of Lake St. John is still very imperfectly known, though the Jesuits penetrated to *Lake Mistassini* in 1672. Mr. A. P. Low, of the Canadian Geological Survey, surveyed this lake in 1885 and found it to be about 100 M. long and 12-15 M. wide, although much greater dimensions had been claimed for it. In 1892-96 Mr. Low surveyed and examined different parts of the Labrador peninsula, including a route from Lake Mistassini to the headwaters of the *Koksoak River* and down this river to *Ungava Bay*, thus traversing the centre of the peninsula from S. to N. It is possible to travel in almost any direction throughout this great tract, though considerable difficulty is offered by the numerous and long portages. The lakes and rivers abound in fish, but large game, with the exception of the caribou, has become scarce, and even this animal is now

abundant only in the far north. — There is some talk of a railway from Roberval to *James Bay*.

FROM CHAMBORD JUNCTION TO CHICOUTIMI, 51 M., in $1\frac{3}{4}$ hr. — The Chicoutimi line from Chambord runs towards the E., at first skirting the S. shore of Lake St. John (left). About 5 M. from Chambord we cross the *Metabetchouan*, the chief S. affluent of Lake St. John (90 M. long), which forms a series of fine falls a few miles higher up. Upon the E. bank lies an old fort of the Hudson Bay Co. — 10 M. *St. Jérôme*, at the mouth of the *Kooshpiganishe*, carries on a brisk trade in cheese and butter. The line traverses a farming-district, still showing here and there traces of the dreadful forest-fire of 1870. — Near (15 M.) *St. Gédéon* we cross the wide *Belle Rivière*, beyond which we leave the lake and turn to the right. — 22 M. *Hébertville Station*, about 4 M. from the large and thriving village of that name (2023 inhab.). Beyond this point we thread the narrow and picturesque *Dorval Pass*, about 1 M. long. To the S. of this part of the line lies *Lake Kenogami* (p. 172; not visible). — At (41 M.) *Jonquière* we cross the *Rivière aux Sables*. Farther on, about 4 M. before reaching Chicoutimi, we obtain a splendid *View of the *Saguenay*, running about 300 ft. below us to the left. On the high bank of the N. shore lies the pretty village of *Ste. Anne de Saguenay* (p. 172). The line now descends rapidly (maximum grade 1:66) and, on entering the town, crosses the *Chicoutimi River* (p. 172), with its falls, by a bridge 60 ft. high.

51 M. *Chicoutimi*, see p. 171.

33. From Quebec to Chicoutimi. The Saguenay.

226 M. STEAMER of the *Richelieu & Ontario Navigation Co.* daily in summer in 22-24 hrs., leaving about 8 30 a.m., on the arrival of the Montreal steamer (R. 38), and reaching *Chicoutimi* early next morning at an hour varying with the tide (fare \$ 4.50, return-fare \$ 8; stateroom extra; D. \$ 1, B. or S. 75 c.).

The scenery of the Saguenay is very imposing, and no travellers of leisure should miss this trip. They may, however, combine with it a visit to Lake St. John, in the manner indicated in R. 32. Warm wraps should be at hand, as the Saguenay can be cold even at midsummer. On the following route the steamer stops regularly only at *Les Eboulements*, *Murray Bay*, *Tadouac*, and *Ha Ha Bay*.

Quebec, see p. 145. As the steamer leaves, we enjoy a splendid retrospect of the city, while the fort-crowned heights of *Lévis* (p. 157) rise to the right. To the left lies the *Beauport Shore* (p. 158), with its long line of white houses. A good distant view of the *Montmorency Falls* (p. 159) is obtained on the same side, before the steamer enters the *South Channel*, between the *Island of Orleans* (p. 157) on the left and the mainland (S. shore of the St. Lawrence) on the right. On the former, above which peers *Mt. Ste. Anne* (p. 160), are seen the villages of *St. Laurent*, *St. Jean*, and *St. François*; on the latter lie *Beaumont*, *St. Michel de Bellechasse* (with a church con-

taining pictures ascribed to masters of the first rank), *St Valier*, and *Berthier*. Two important new forts are being built at Beaumont (comp. p. 150). As we clear the end of the Isle of Orleans, about 30 M. from Quebec, *Cap Tourmente* (p. 160) comes into sight on the left, raising its huge bulk 1960 ft. into the air. The course of the steamer now lies near the N. shore, which is lined by the black forms of the *Laurentide Mts.* (p. 139), here abutting closely on the river. Among the most prominent points are *Cap Rouge*, *Cap Gribauve* (2170 ft.), *Saut au Cochon*, and *Cap Maillard*. Between us and the S. bank lie a number of islands, the largest of which are *Reaux Island*, *Grosse Isle* (quarantine-station), and the twin *Isle aux Grues*, or *Crane Island*, and *Goose Island*, which are together 12 M. long, and are frequented in spring and autumn by wild geese and other waterfowl.

44 M. (1.). *St. François Xavier*, at the mouth of the *Bouchard*, $3\frac{1}{2}$ M. below Cape Maillard, is the only village on the inhospitable N. shore for nearly 30 M. The river is here about 13 M. wide, and the S. shore is hardly visible from the steamer.

53 M. (1.). *St. Paul's Bay*, or *Baie St. Paul*, opening out beyond *Cap Labaie*, receives the waters of two small rivers, the *Moulin* and the *Gouffre*. The town, on the latter river, has about 2500 inhab. and is frequented by a few summer-visitors (simple boarding-houses). — The E. arm of the bay is formed by *Cap Corbeau*.

To the right, opposite St. Paul's Bay, lies the *Isle aux Coudres* ('Hazel Island'), so named by Cartier in 1535. It is about 6 M. long and $2\frac{1}{2}$ M. wide and contains (1901) 1055 inhab., who are said to be, perhaps, more purely mediæval French than any other group of Canadians. The island has belonged to the Seminary of Quebec (p. 152) since 1687. In 1759 it was occupied by Wolfe.

61 M. (1.) *Les Eboulements*, a quaint little village, clustered round the handsome church of Notre Dame, nearly opposite the E. end of the Isle aux Coudres and about 1000 ft. above the river. Over it towers the dark mass of *Mt. Eboulement* (2550 ft.). Pop. (1901) 2369.

This part of the N. shore of the St. Lawrence has been frequently visited by seismic disturbances of considerable violence, and traces may still be observed here of the landslides of 1663, a year of many earthquakes and strange meteorological phenomena. The old village of Les Eboulements stood on the shore, about 2 M. to the E. of the quay; but the river made such encroachments on it that it was removed to its present picturesque but windy site about 80 years ago. This fact has already given rise to a romantic legend about a submerged town and church, sometimes visible beneath the St. Lawrence.

73 M. (1.) *St. Irénée* (Charlevoix, \$2- $2\frac{1}{2}$; several boarding-houses), a small watering-place with (1901) 1059 inhab. and the summer-homes of various Montrealers and Quebecers. This part of the St. Lawrence is much frequented by white whales (*Beluga Borealis*; often misnamed white porpoises), which attain a length of 15-20 ft. Their skin makes a very valuable leather, while 50-100 gallons of oil, worth \$1 a gallon, is procured from an ordinary carcase. Halibut, sturgeon, salmon, and smaller fish abound.

80 M. (1.) *Pointe à Pic*, the landing-place for **Murray Bay** (**Manoir Richelieu*, a large house, with swimming and other baths, from \$4; *Lorne House*, \$2; *Warren's*, well spoken of, frequented mainly by ladies and children, \$1-1½; numerous boarding-houses), the chief watering-place on the N. shore of the St. Lawrence and one of the most frequented summer-resorts in Canada. Its French name is *Malbaie*. The town proper, with (1901) 2673 inhab., lies at the head of the bay, on the *Murray River*; but the summer-visitors congregate at *Pointe à Pic* and *Cap à l'Aigle*, the two horns of the bay, each about 3 M. from the town. Board may be obtained in the farm-houses for about \$5-7 a week, but the 'habitant', who is an inveterate bargainer, invariably asks more than he expects to get. — In summer a steam-ferry (1¼ hr.) plies to *Rivière Ouelle*, connecting there with the railway from Montreal (comp. p. 95). By this route Murray Bay may be reached from Montreal in 10¼ hrs. (through-fare \$5.50, sleeper \$2).

The bay was explored in 1608 by Champlain, who named it *La Malle Baie*, on account of 'the tide that runs there marvellously'. On the British conquest of Canada the district was granted to two Scottish officers, who quickly peopled it with Highland families. The descendants of these Scots, however, became thoroughly French in language and customs and are hardly to be distinguished from the other inhabitants of Lower Canada. The names of Fraser, Blackburn, Warren, and MacDougall are still common among descendants who speak nothing but French. Several American prisoners-of-war were confined here in 1776.

The attractions of Murray Bay include wild and fine scenery, fair boating, bathing (rather cold), golf, bracing air, and excellent fishing. The last is enjoyed mainly in the Murray River and in some small lakes (*Gravelle*, *Comporté*, *Morin*, etc.) within easy reach. Among the chief points for walks or for drives in a 'calèche' (see p. 145) are the *Lower Fraser Falls* and the *Chute Desbiens*, each about 5 M. off, and the curious *Trou*, 4 M. farther. The **Upper Fraser Falls*, 3 M. from the Lower Falls, and reached by a different road, deserve a visit. The *Petit* and the *Grand Ruisseau* are reached either by the Quebec road or by boat. The district abounds in points of geological interest, including the regularly-shaped mounds of stratified sand and clay due to the action of land-slides. The country a few miles back from the river is an almost unexplored wilderness of rugged hill and forest, into which the enthusiastic tourist or sportsman may penetrate with Indian guides and camping-outfit. Caribou and bear are among the possibilities of the game-bag. — About 9 M. up the river is the settlement of *Ste. Agnes* (1588 inhab. in 1901)

From Murray Bay the steamer steers diagonally across the river, here about 14-15 M. wide. *Kamouraska* (see p. 95) lies on the S. shore, nearly opposite Murray Bay and concealed by an archipelago of small islands. Our course leads between the high and rocky *Pilgrim Islands* (lighthouse; r.) and the long and narrow *Hare Island* (l.).

110 M. (r.) *Point à Beaulieu* (Bellevue, Venise, \$1½-2), the landing-place for Cacouna and for *Rivière du Loup* (p. 94), which lies about 2½ M. from the end of the long pier and makes a very picturesque effect, with its large church and white houses, as seen from the river.

Cacouna (*Mansion House*, *Dufferin House*, \$1½-2; *Sirois*, *Mme. Michaud's*, and many other boarding-houses), 6 M. from Point à Beaulieu (carriage \$1-2, bargaining advisable), lies on a bank rising about 100 ft. above the

St Lawrence, and claims to be the most fashionable summer-resort of Canada. Its situation commands a fine view of the broad St. Lawrence, backed by the dark Laurentian Mts. (especially beautiful at sunset); and a smooth sandy beach gives good opportunity for bathing. The scenery around it is less rugged than that of Murray Bay, and the water is somewhat less chilly. Fair trout-fishing is obtained in (3 M.) *Trout Brook*, but better sport is afforded by the lakes, 12-15 M distant. Many Canadian families have pleasant summer-cottages here, and the gaiety of the place centres, perhaps, round these rather than round the hotels. Cacouna is much quieter and simpler than the fashionable resorts of the United States, and the name of the 'Saratoga of Canada', sometimes given to it, is very misleading. — The village contains 600 inhab., nearly all French; and near it, on the beach, is a small settlement of Indians, of whom souvenirs may be purchased.

The steamer now heads across stream (N.W.) for the mouth of the Saguenay. A good view of Cacouna (p. 168), 3-4 M. distant, is obtained to the right. Away to the left are Hare Island (p. 168), the *Brandy Pots*, and *White Island*. About halfway across we pass near *Red Island* (r.), with its lighthouse and light-ship.

132 M. Tadousac (**Tadousac Hotel*, from \$ 3; *Saguenay*, \$ 1; boarding-houses), a village of 5-600 inhab., picturesquely situated just below the confluence of the St. Lawrence and the *Saguenay* (see p. 170), and now frequented as a summer-resort, is of special interest as the oldest continuously occupied European settlement in Canada. The Bay of Tadousac, opening towards the St. Lawrence, affords a safe and commodious little harbour, but the steamboat-wharf is in the *Anse à l'Eau*, a small creek in the Saguenay, opening to the S.W. and separated from the bay by a small and rocky peninsula. On the opposite (S.) side of the Saguenay rises *Pointe Noire* (400 ft.).

Tadousac derives its name ('nipple') from the 'mamelons' or rounded hills by which it is enclosed. The bathing here is good, though cold, and boating is much in vogue in the sheltered bay on the St. Lawrence. Good fishing is to be had in numerous small lakes, 3-4 M. inland, and sea-trout are caught in the Saguenay. The golf-links are pleasant.

Tadousac was visited in 1535 by Jacques Cartier, who heard strange stories of the Saguenay from the Indians he found fishing here. A trading-post was established here in 1599 by Pontgravé and Chauvin, and Champlain visited it in their company in 1602. For scores of years to come this was the chief meeting-place and market of the French fur-traders and the Indians. The Basque, Norman, and Breton mariners, who had long frequented the Banks of Newfoundland (p. 105), also found their way to Tadousac in pursuit of whales. In 1628 the little settlement was occupied by Sir David Kirke, and it was thence he sent his brothers to capture Quebec (p. 147). In 1661 the garrison was massacred by the Iroquois, and in 1690 three French frigates found refuge here from Sir William Phipps (p. 147). Later it became a post of the Hudson Bay Co. Tadousac also plays a prominent part in the story of the early efforts of the French missionaries, the first mission being established here in 1615 by the Récollet Father Dolbeau. The Jesuits had charge of it from 1641 to 1782.

The most interesting spot in Tadousac is, for most visitors, the quaint little **Chapel of the Jesuit Mission*, which was built in 1747-50 on the site of a more ancient church and still preserves the primitiveness of its original aspect. It contains some interesting relics and also the tomb of *Father de la Brosse*, the last Jesuit missionary, of whose death a picturesque legend is current. The bell is that of the original chapel and has seen nearly

three centuries of service. Close to the chapel, which overlooks the Bay of Tadousac, is the large *Tadousac Hotel* (p. 169), and not far off are the plain but substantial old buildings of the *Hudson Bay Co.* The villa which Lord Dufferin built for himself in 1873 also faces the bay. Adjoining the Anse à l'Eau is a *Government Piscicultural Station*, with a pool in which numbers of large salmon, kept here for breeding purposes, may be seen. — Opposite Tadousac is the small settlement of *St. Catharmer's Bay*.

The *"Saguenay"*, which the steamer now ascends, is one of the chief tributaries of the St. Lawrence and unquestionably one of the most remarkable rivers on the American continent. From the point where it takes the name Saguenay, as it issues from Lake St. John, it is about 110 M. long; but its real source is to be found at least 200 M. farther up, in the headwaters of the large rivers flowing into that lake (p. 164). The lower part of the river, bordered by hills and precipices of sombre and impressive grandeur, has been aptly described as 'a tremendous chasm cleft in a nearly straight line for some sixty miles'. Its breadth varies from $\frac{1}{2}$ M. to $2\frac{1}{2}$ M., its depth is immense, its bottom being at least 600 ft. below that of the St. Lawrence at their confluence. The striated cliffs of gneiss and syenite are but scantily relieved by vegetation, and, save for an occasional white whale (p. 167), no animal life is visible. The scenery is grand but sombre.

'To speak strictly, the Saguenay is not a river at all but a true fjord, consisting of the deeply-eroded bed of a glacier into which the sea penetrated on the melting of the ice. This glacier was formed originally in a much shallower river-valley, apparently located on an ancient 'fault' or line of weakness in the Archean rock. The trough of the Saguenay is thus of the same origin as the very similar troughs in N. Labrador, Baffin Land, Greenland, and Norway' (*Reginald Daly*)

For the first few miles after we leave Tadousac the cliffs on either side are 600-1100 ft. high.

136 M. (r.; 4 M. from Tadousac) *Pointe La Boule* (600 ft.).

142 M. (l.) *St. Etienne Bay*, with *Pointe Brise-Culottes* as its N. arm, beyond which the river bends to the left (W.).

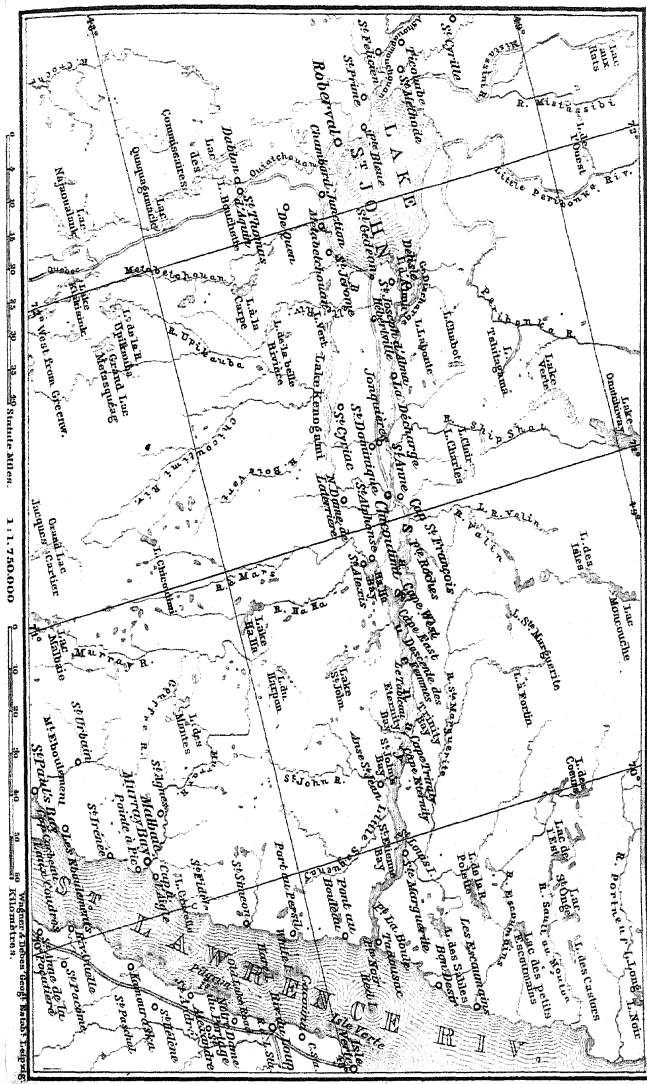
147 M. (r.) Mouth of the *Ste. Marguerite*, the chief tributary of the Saguenay and famous for its salmon-fishing.

149 M. (l.) *St. Louis Isle*, a tree-covered mass of granite. The river is here 1200 ft. deep. To the right, just above, is a group of islets at the mouth of the *Rivière à Rouge* or *Atocas*.

153 M. (l.) Mouth of the *Little Saguenay River*.

157 M. (l.) *St. John's Bay* (*Anse St. Jean*), with the mouth of the *St. John River*, a hamlet, and a small waterfall.

164 M. (l.) ***Cape Eternity* (1700 ft.) and (165 M., l.) ***Cape Trinity* (1500 ft.), with the deep and narrow *Eternity Bay* between them, form the culmination of the sublime scenery of the Saguenay. The former of the two huge masses of rock slopes gently backward from the stream and is densely clothed with pines, but Cape Trinity rises perfectly sheer from the black water, a naked wall of granite. Its name is derived from the three steps in which it climbs from the river. Near the top are a cross and a gilded statue of the Virgin.



The steamer runs close to the precipice, the steam-whistle is blown to show the marvellous echo, and passengers try their strength in throwing stones at the apparently easily-reached wall. — The front of the cliffs is defaced with the advertisement of a Quebec tradesman, whom, it is hoped, all right-minded tourists will on this account religiously boycott

166½ M. (1) *La Niche*, or *Statue Point*. 'where at about 1000 feet above the water, a huge, rough Gothic arch gives entrance to a cave, in which, as yet, the foot of man has never trodden. Before the entrance to this black aperture, a gigantic rock, like the statue of some dead Titan, once stood. A few years ago, during the winter, it gave way, and the monstrous statue came crashing down through the ice of the Saguenay, and left bare to view the entrance to the cavern it had guarded perhaps for ages' (from the *Times*).

172 M. (r.) *Trinity Bay*.

175 M. (1.) *Le Tableau*, a cliff 900 ft. high, presenting to the river an immense smooth front like a canvas prepared for painting.

181 M. (r.) *Descente des Femmes*, a cove said to owe its name to the story that a party of Indian squaws managed to reach the river through this ravine and so procured help for their husbands, who were starving in the back-country.

187 M. (r.) *Cape East*. The river here is about 2 M. wide, and at ordinary spring-tides the water rises 18 ft

Opposite Cape East opens *Ha Ha Bay*, 7 M. long and 1-2½ M. wide. The steamer usually ascends this bay, either in going or coming, to (195 M.) *St. Alphonse* (McLean's Hotel, from \$2), in the N.W. angle of the bay, near the mouth of the *Wabouchagama* (930 inhab.).

If time allows, visitors may drive from *St. Alphonse* round the head of the bay, crossing the *River Mars* (salmon), to (3 M.) *St. Alexis*, with its busy lumber-trade. — *Chicoutimi* (see below) is 12 M. from *St. Alphonse*.

The steamer now returns to the Saguenay and steers to the left round *Cape West*, opposite Cape East.

212 M. (r.) *High Point*. — 216 M. (r.) *Pointe Roches*.

220 M. (r.) Mouth of the *River Orignal*. Beyond this there are farms and houses on both sides, and the river narrows to ½ M

227 M (r) *Cap St François*, just below the *Anse aux Foins*.

228 M. (1.) **Chicoutimi** (*Château Saguenay*, second-rate, from \$3; *Chicoutimi*, \$1.25), a busy little lumbering and pulp-making town of (1901) 3826 inhab., is picturesquely situated on the S. (right) bank of the Saguenay, at the head of navigation and the mouth of the *Chicoutimi River*. The name means 'deep water'. Among the most prominent features of the town are the large and high-lying *Roman Catholic Cathedral*, *Church of the Eudist Fathers*, *College*, *Sailors' Hospital*, and *Convents*. On the *Chicoutimi River*, near the railway-bridge (p. 166), once lay the huge *Price Lumber Mills*, long one of the largest establishments of the kind in Canada, but this industry has now been transferred to Jonquièrre and Metabetchouan. The Price family was identified with the welfare of Chicoutimi for about

60 years; and a fine monument has been erected by the citizens, in front of the hospital, to the memory of *William Price* (d. 1881), known as the 'King of the Saguenay'. The *Chicoutimi Pulp Mills* turn out 70,000 tons of pulp annually, all of which is shipped to Europe. Near the old lumber-mills is a *Chapel*, erected in 1893 upon the site of an older building of 1727 and of the original little Jesuit chapel planted there for the Indians in 1670. Some interesting relics were discovered in digging the foundations of the new chapel.

Railway from Chicoutimi to Chambord Junction (for Roberval and Quebec), see p. 166. — *Descent of the Saguenay by Canoe from Lake St. John to Chicoutimi*, see p. 165.

The *Chicoutimi River* rises far to the S., near *Lake Jacques Cartier*, and flows to the N. to *Lake Kenogami* (15 M. long and 1 M. wide). Thence it descends nearly 500 ft. in its course of 18 M. to the Saguenay, forming a picturesque **Waterfall*, 45 ft. high, just above the town of Chicoutimi (comp. p. 166) It affords good trout and salmon fishing.

On the high bank of the Saguenay, opposite Chicoutimi, lies the small village of *Ste. Anne de Saguenay*.

The steamer leaves Chicoutimi between midnight and 6 a.m., about 1 hr. after high-water.

VI. ONTARIO.

Route	Page
34. From Montreal to Ottawa	174
a. Viâ Canadian Pacific Railway Short Line	174
b. Viâ Calumet	175
c. Viâ Grand Trunk Railway	176
35. Ottawa	176
Environs of Ottawa	181
From Ottawa to Toronto, to Prescott, to Waltham, to Maniwaki, to Smith's Falls and Brockville, to Corn- wall and Tupper Lake	182
36. From Ottawa to Kingston by Steamer	183
37. From Ottawa to Montreal by Steamer	184
38. From Montreal to Toronto	186
a. Viâ Canadian Pacific Railway	186
From Peterborough to Lakefield. Kawartha Lakes	187
From Peterborough to Haliburton	188
b. Viâ Grand Trunk Railway	188
Pictou and the Prince Edward Peninsula	189
Scarboro Heights	190
From Scarboro Junction to Cobocok and to Jackson's Point.	190
39. Toronto	190
40. From Toronto to North Bay. Muskoka District	197
Collingwood. Penetang. Lake Simcoe	198
Lake Couchiching	199
Huntsville Lakes and Lake of Bays	200
The Maganetawan	200
I. From Muskoka Wharf to Rosseau	201
II. From Muskoka Wharf to Port Cockburn	202
III. From Bracebridge to Bala	203
41. From Ottawa to Depot Harbour (Parry Sound)	203
Algonquin Park	204
42. From Toronto to Detroit	205
a. Viâ Grand Trunk Railway	205
b. Viâ Canadian Pacific Railway	206
43. From Toronto to Niagara (and Buffalo)	208
a. By Steamer	208
b. By Grand Trunk Railway	209
Burlington Beach	210
From Hamilton to Allandale	210
From Hamilton to Port Dover. Welland Ship Canal	211
c. By Canadian Pacific Railway	212
44. From Detroit to Buffalo	212
a. Viâ Michigan Central Railroad	212
b. Viâ Grand Trunk Railway	213
c. By Steamer	214
45. Niagara Falls.	215

Route	Page
46. From Toronto to Owen Sound and Fort William . .	222
Elora	222
From Owen Sound to Sault-Ste-Marie by the North Channel	223
The St. Mary's or Soo Ship Canal	225
47. From Toronto to Montreal by Steamer. The St. Lawrence River and the Thousand Islands	226
48. From Montreal to Port Arthur and Fort William . .	230
From Mattawa to Timiskaming	232
Lake Nipissing	233
From Sudbury to Sault-Ste-Marie	233
Michipicoten and Moose Rivers	234
Nipigon River and Lake	235
From Port Arthur to Gundersen	236
49. From North Bay to New Liskeard. Temagami Region .	236
Lake Timiskaming	239

34. From Montreal to Ottawa.

a. Via Canadian Pacific Railway Short Line.

112 M. RAILWAY in 3-3½ hrs. (fare \$3 50; parlor-car 50 c.; sleeper \$1.50). This line, opened in 1893, affords the shortest and most direct route between Montreal and Ottawa and also forms part of the transcontinental through-route described in R.R. 48, 50, 52, & 55.

From *Montreal* (Windsor St. Station) to (24 M.) *Vaudreuil*, see p. 186. Our line now turns to the N.W. and skirts the S. bank of the *Ottawa River*, which here forms the **Lake of Two Mountains* (p. 185, views to the right).

27 M. *Isle Cadieux*; 30 M. *Como* (p. 185); 33 M. *Hudson* (p. 185). On the opposite side of the *Ottawa*, high up among the trees, is seen the white building of the Trappist convent of *Oka* (p. 185). — 37 M. *Lavigne*.

41 M. *Rigaud* (hotels and boarding-houses), a village prettily situated at the base of a wooded hill surmounted by a gilt cross. About halfway up is a small sanctuary, covered with a gilt dome and approached by a 'Route de Calvaire'. The flat summit of the hill, known as the 'Devil's Garden', is strewn with curious rounded boulders (the débris of an ancient moraine). *Rigaud* is the junction of a short line to (7 M.) *Port Fortune*, nearly opposite *Carillon* (p. 175). — Our line now turns to the left (W.), quits the river, and enters the province of *Ontario*. 49 M. *St. Eugène*; 54 M. *Stardale*. — 58 M. *Vankleek Hill* is the junction of branch-lines to (7½ M.) *Hawkesbury* (to the N., on the river; 4150 inhab. in 1901) and to (13½ M.) *Glen Robertson* (S.; p. 176). — 61 M. *McAlpin*. The country traversed is uninteresting but well adapted for farming.

66 M. *Caledonia Springs* (168 ft.; **Caledonia Springs Hotel*, belonging to the C.P.R., from \$3; *Lake Cottage*, *Victoria Cottage*, \$1½), a resort frequented for its alkaline-saline springs, which

are especially efficacious in gout, rheumatism, and affections of the digestive organs. — The railway runs hence for the most part through uncleared woodland, marred at places by forest-fires. — 70 M. *Alfred*; 75 M. *Plantagenet* (C.P.R. Hotel, Wilson's Hotel, \$3-4), a C.P.R. divisional point, with mineral springs; 80 M. *Pendleton*; 86 M. *The Brook*; 89 M. *Hammond*, 95 M. *Leonard*; 99 M. *Navan*; 105 M. *Blackburn*.

112 M. *Ottawa* (Central Station), see p. 176.

b. Viâ Calumet.

121 M. CANADIAN PACIFIC RAILWAY in 4½ hrs. (fares as at p. 174).

Montreal, see p. 125. The train runs through the E. part of the city to (5 M.) *Mile End*, passes the *Convent of the Sacred Heart* (on the hills to the right), crosses a branch of the *Ottawa* at (10 M.) *Bordeaux*, and diverges to the left from the line to Quebec at (13 M.) *St. Martin Junction* (p. 139). At (18 M.) *Ste. Rose*, a French village, frequented as a summer-resort, we cross the northernmost branch of the *Ottawa*. The valley of the *Ottawa*, which we now follow, is occupied mainly by long narrow French farms. We cross numerous streams. — 20 M. *Ste. Thérèse Junction*.

From *STE. THÉRÈSE TO NOMINING*, 104 M., railway in 4¾ hrs. (fares \$3 55, \$2.60) This line runs to the N.W., penetrating the *Laurentian Mts.* and affording access to several favourite sporting resorts. — 8 M. *St. Janvier*; 14 M. *St. Jérôme*, also a station of the C.N.Q.R. (see p. 142); 25 M. *Montfort Junction*, for the C.N.Q.R. line from *Montreal* to *Montfort*, *Sixteen Island Lake*, and *Huberdeau*. — 34 M. *St. Margaret*; 38 M. *Val Morin* (*Laurentian Lodge*, \$2); 44 M. *Ste. Agathe*, a sporting centre, 57 M. *St. Faustin*; 65 M. *St. Jovite*; 71 M. *Mont Tremblant*; 81 M. *Labelle*; 95 M. *Annonciation*. — 104 M. *Nominig* (*Gauthier*, \$1½), on *Lake Nominig*.

From *Ste. Thérèse* branch-lines also run to (8 M.) *St. Eustache* and (15 M.) *St. Lin*, the birthplace of Sir Wilfrid Laurier (b. 1841).

28 M. *St. Augustin*; 33 M. *Ste. Scholastique*; 38 M. *St. Hermas*. — 44 M. *Lachute*, with mills and (1901) 2022 inhab., is the station for *St. Andrews*. At (58 M.) *Grenville* (*Victoria*; p. 185) we reach the *Ottawa*, the N. bank of which we henceforth follow pretty closely (views to left) From *Grenville* a short railway runs to *Carillon* (p. 174). The *Laurentian Hills* (p. 161) rise to the right.

60 M. *Calumet* (Rail. Restaurant), at the confluence of the *Ottawa* and *River Rouge*. — 71 M. *Fassett*; 75 M. *Montebello* (p. 184); 79 M. *Papineauville* (p. 184). At (84 M.) *Plaisance* we cross the *North Nation River*. 91 M. *Thurso*, 94 M. *Lochaber*. Just beyond (100 M.) *Buckingham* (2936 inhab. in 1901), whence a branch-line runs to the N. into a district of phosphate, mica, and plumbago mines, we cross the *Lièvre River*, with its fine rapids (best view to the right). 115 M. *Gatineau*. As we approach *Ottawa* we obtain a fine view of the *Parliament Buildings* (p. 177) and cross the *Gatineau River*. In crossing from (119 M.) *Hull* (p. 180) to (121 M.) *Ottawa* (R. 35; *Union Station*) we see the top of the *Chaudière Falls* (l.; p. 180).

c. Viâ Grand Trunk Railway.

116 M. RAILWAY in 3-4 hrs (fares as at p. 174) This line traverses Ontario, keeping to the S of the Ottawa.

From *Montreal* to (37 M.) *Coteau Junction*, see p. 188. Lines diverge here to *Valleyfield* (p. 16), *Rouse's Point* (p. 14), and *St. Albans* (p. 15). At (44 M.) *St. Polycarpe Junction*, with the usual tin-spined church (left), we cross the C.P.R. (see p. 186), and beyond (48 M.) *Ste. Justine*, we leave Quebec and enter Ontario. 54 M. *Glen Robertson* (p. 174) is the junction of a line to (13½ M.) *Vankleek Hill* (p. 174) and (21 M.) *Hawkesbury* (p. 174) — 61 M. *Alexandria* (Grand Union, Commercial, \$1½), a busy little place, with (1904) 1911 inhab. and some mills and factories. — We now descend pretty rapidly to (68 M.) *Greenfield* and (72 M.) *Maxville* (lumber). 78 M. *Moose Creek*, with numerous freight-car side-tracks. At (86 M.) *Casselman* (Royal Hotel) we cross the *North Nation River*. Large stacks of bark are seen at (94 M.) *South Indian*, the junction of a branch-line to (8 M.) *Hammond*, (12 M.) *Clarence Creek*, and (16 M.) *Rockland*. — 105 M. *Eastman's Springs* (Hotel, \$1½-2) are frequented by the Ottawans. — We have a good view of Ottawa to the right as we near it, crossing the C.P.R. and the *Rideau River*.

116 M. *Ottawa* (Central Station), see below.

35. Ottawa.

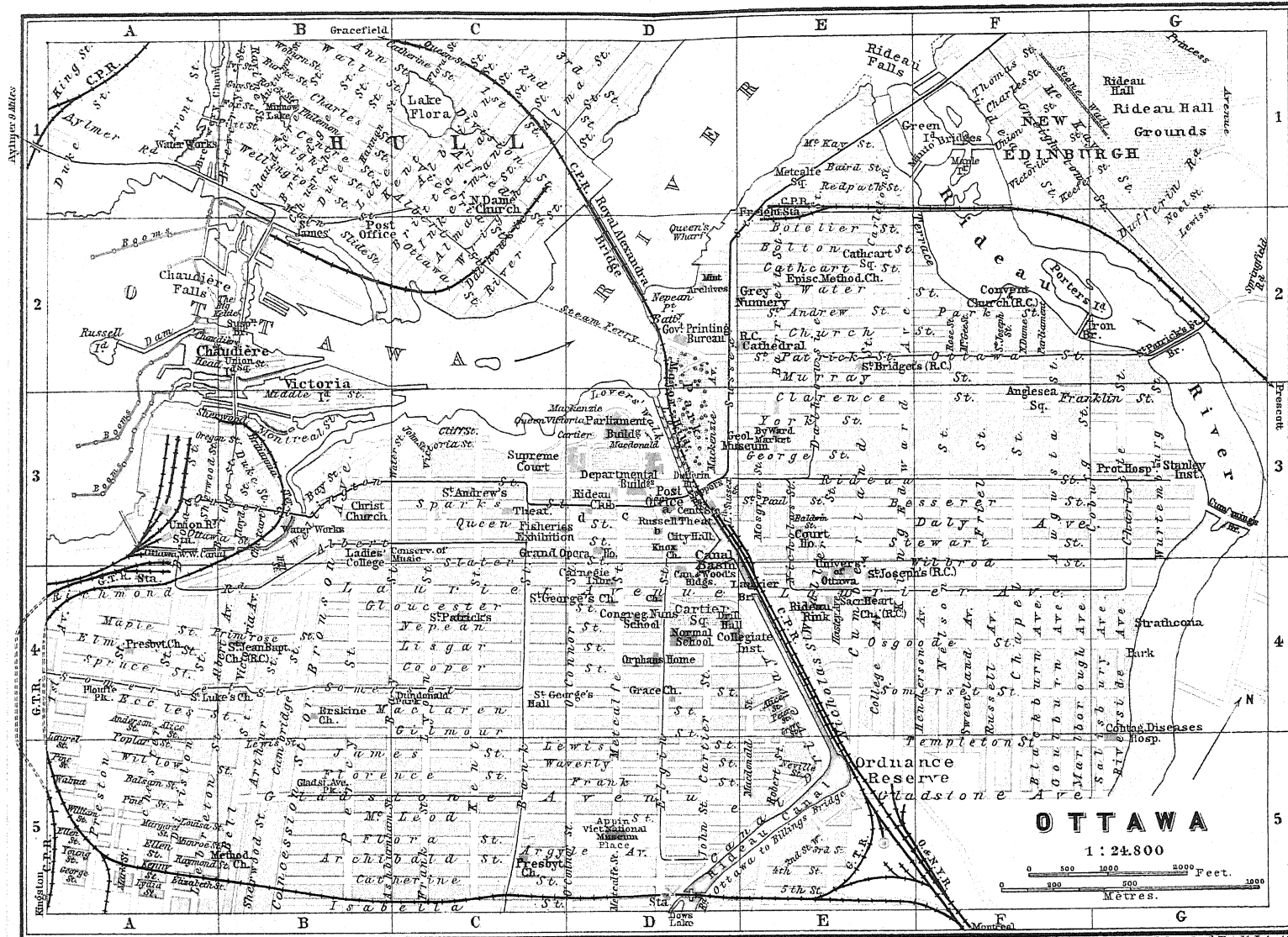
Railway Stations. *Union Railway Station* (Pl. A, 3), Broad St., for the C. P. R. trains to Montreal, Toronto, and the West, *Central Railway Station*, to the S. of Sappers Bridge (Pl. D, 3), for the Grand Trunk and New York & Ottawa railways and for the C. P. R. 'Short Line' to Montreal.

Hotels. RUSSELL HOUSE (Pl. a; D, 3), Sparks St., near the Parliament Buildings, \$2½-4, R. from \$1; GRAND UNION (Pl. b; D, 3), City Hall Sq., \$2-3; WINDSOR (Pl. c; D, 3), cor. of Queen St. and Metcalfe St., \$2-3; BRUNSWICK (Pl. d; D, 3), 122 Sparks St., \$1½, unpretending. The hotels are apt to be crowded during the Parliamentary session (usually Feb.-May), and it is then advisable to order rooms in advance. Ottawa is still much in need of a really first-class hotel, but it is hoped that the railway-companies will soon supply this want — *Boarding Houses* (\$5-8 per week) and *Furnished Apartments* (from \$2 per week) are numerous. Information may be obtained at the Y. M. C. A., cor. of Queen and O'Connor Sts (Pl. D, 3), or at the Y. W. C. A., cor. of Metcalfe St. and Laurier Ave. West (Pl. D, 4).

Restaurants. At the above-named hotels; *Bodega*, 34 Wellington St.; *Queen's*, 15 Elgin St., unpretending, D. 25 c.; *Walker, Burns, Sparks St* (Nos 78, 79; these two confectioners); *Railway Restaurants*. — *Miss Stewart's Tea Rooms*, Sparks St

Cabs. Within the area bounded by the Ottawa River and George St. (N.), William and Nicholas Str. (E.), Laurier Ave. (S.), and Bank St. (W.) the fare for 1 pers. is 25 c., for each addit. pers. 15 c. Outside this area and within 3 M. of the city limits the charge is 50 c. per 20 min. for 1-2 pers., 75 c. for 3-4 pers., each 20 min. additional 25 c. Per hour, with one horse, \$1, each subsequent ¼ hr. 20 c.; with two horses \$1.25, 25 c. — Reasonable baggage free. — One-half more from 11 p. m. to 7 a. m.

Tramways (cars lighted, heated, and propelled by electricity generated by the Chaudière Falls) run through the chief streets, passing most of the important public buildings, and to *Rideau Hall* (Pl. G, 1), *Rockcliffe Park* (p. 181), etc. Uniform fare 5 c. — *Electric Railways* also run to *Hull* (p. 180; 5 c.; thrice hourly), *Britannia* (p. 182; 5 c.), *Aylmer* (p. 182; 10 c.), etc.



Steamers ply down the Ottawa to *Grenville* and *Montreal* (see R 37) and through the Rideau Canal to (120 M) *Kingston* (see p 227).

Rideau Club (Pl. D, 3), 84 Wellington St., opposite the Parliament Building — Theatres. *Russell Theatre* (Pl. D, 3), behind the Russell House, *Grand Opera House* (Pl. D, 3), Albert St., between O'Connor and Metcalfe Sts.; *Vaudeville Theatre* (Pl. C, 3), Sparks St., to the W. of Bank St.

Post Office (Pl. D, 3), Wellington St. (open 8-8)

General Consul of the United States, *Mr J. G. Foster*, 26 Wellington St.

Ottawa, the capital of the Dominion of Canada, the residence of the Governor-General, and the seat of the Supreme Court, is situated on the right bank of the *Ottawa*, at its confluence with the *Rideau*, both rivers forming picturesque falls opposite the city (see p. 180). It fronts on the Ottawa for a distance of about 2 M., rising in the middle in a cluster of bold bluffs (160 ft.), crowned by the noble Parliament Buildings (see below). The city, which lies in 45° 26' N. lat. (about 5 M. farther to the S. than *Montreal*), is divided into an *Upper* and a *Lower Town* by the *Rideau Canal*, connecting it with *Kingston* (see p. 227). To the S. of Parliament Hill lies the commercial part of the town, including the lumber-district round the *Chaudière Falls* (p. 180). *Sparks Street* (Pl. B-D, 3) is the chief retail business street, containing the best shops. Ottawa is also important as the seat of a busy trade in lumber, and its growth has been very rapid, the population rising from 14,669 in 1861 to 27,412 in 1881 and 59,928 in 1901. The inhabitants are divided nearly equally between the French and British races and the Protestant and Roman Catholic faiths.

The first settler at the portage round the *Chaudière Falls* was *Philemon Wright* of Woburn (Mass.), who established himself on the Quebec side of the river (in what is now *Hull*, p. 180) in 1800. About a score of years later he transferred his claim to the hills on the opposite side of the river to a teamster named *Sparks*, in lieu of a debt of \$200. In 1827 the *Rideau Canal* was constructed, at a cost of \$2,500,000 (500,000 l.), to connect Lower Canada with Lake Ontario and obviate the necessity of vessels ascending the St. Lawrence under the enemy's fire. The settlement which grew up at the lower end of this canal was named *Bytown*, after *Col. By*, the engineer officer who had made the surveys for the project, and on its incorporation as a city (1854), when it had 10,000 inhab., assumed the name of *Ottawa*. In 1858 Queen Victoria put an end to the conflicting claims of *Montreal* and *Quebec*, *Kingston* and *Toronto*, by selecting *Ottawa* as the official capital of the Dominion of Canada.

Selected arbitrarily, like *Washington*, Ottawa has followed *Washington's* example in attempting to make itself worthy of the position to which it has been raised, and already ranks as one of the handsomest and best-kept cities of the Dominion, with abundant promise of rapid improvement in every direction. Like *Washington*, too, Ottawa has become the scientific centre of the country and the headquarters of the chief scientific societies and collections; while the presence of the Governor-General makes it, during the sitting of Parliament, a natural focus of cultivated and fashionable society. — The annual value of the produce of the saw-mills of Ottawa (250,000,000 ft. of lumber) is about \$ 6,000,000. In 1906 the city's valuation for civic assessment was \$37,973,180. The value of its trade in 1905-6 was \$5,639,024. The total available water-power within the city limits is 100,000 horse-power, within a radius of 45 M. about 920,000.

See the excellent account of Ottawa by *F. A. Dixon* in 'Picturesque Canada'

The most conspicuous single feature in Ottawa is the magnificent group of *Government Buildings (Pl. D, 3), commandingly situated

on a bluff overlooking the Ottawa, and covering an area of four acres. They were erected in 1859-65, at a cost of over \$5,000,000 (1,000,000 l.), and are in a 'style of architecture based on the Gothic of the 12th cent., combining the elements of grace and simplicity which the climate of the country seems to require. A cream-coloured sandstone from the neighbouring district, to which age is fast adding fresh beauty of colour, with arches over the doors and windows of a warm red sandstone from Potsdam and dressings of Ohio freestone, has been happily employed — the effect of colour, apart from form, being most grateful to the eye' (*Dixon*). The architects were *Fuller & Jones* (Parliament Building) and *Stent & Laver* (Departmental Buildings). The buildings are surrounded by beautifully kept lawns, diversified with flower-beds. The central building, with its fine tower (220 ft. high), is 470 ft. in length and is occupied by the *Houses of Parliament*, the two wings harbour the various *Ministerial Offices*. Behind the main building is the **Library of Parliament*, a beautiful polygonal structure, with a dome supported by graceful flying buttresses.

'As regards purity of art and manliness of conception, their (i.e. the architects') joint work is entitled to the very highest praise . . . I know no modern Gothic purer of its kind or less sullied with fictitious ornamentation. . . . I know no site for such a set of buildings so happy as regards both beauty and grandeur' (*Anthony Trollope*)

The Interior is neat and plain in its appointments, but there are good stone carvings at various points of the halls and corridors of the Parliament Building. The *Senate Chamber*, to the right of the entrance, and the *House of Commons*, to the left, are commodious and business-like apartments. During the sitting of Parliament visitors are admitted to the public galleries by a Member's order, which strangers can generally procure on application to one of the messengers; admission to the Speaker's gallery requires a Speaker's order. The corridor of the Senate has portraits of ex-Speakers, while the Commons Reading Room contains portraits of ex-Speakers of the House. In the Railway Committee Room of the House of Commons is a large picture, by *G. Harris*, of the statesmen who brought about the Confederation of the Dominion in 1867, with portraits of Sir John Macdonald, Sir Charles Tupper, Sir Alexander Galt, Hon. George Brown (p. 195), Sir Alex. Campbell, Hon. Thos. D'Arcy McGee, Sir George E. Cartier (see p. 179), Hon. Joseph Howe (p. 95), Sir S. Leonard Tilley, Hon. Wm. McDougall, and others. 'Few of the speeches delivered in the House can be called inspiring. In fact when not personal, they are prosaic. This can hardly be helped, for a Canadian Parliament, like Congress in the United States, deals, as a rule, with matters from which only genius could draw inspiration. The French-Canadian members, in consequence, probably, of the classical training that is the basis of their education, are far superior to their English-speaking *confrères* in accuracy of expression and grace of style. Even when they speak in English these qualities are noticeable' (*Dixon*) — The building to the right (E.) contains the departments of *State, Finance, the Privy Council, Justice, and the Auditor General*, and the *Indian Section* of the department of the Interior, also the *Office of the Governor-General*. The left wing, the upper floor and roof of which were destroyed by fire in 1897 and since rebuilt, is devoted to the departments of *Public Works, Railways, Marine and Fisheries, Inland Revenue, Trade and Commerce, and Customs*. The *Post-Master General*, the *Minister of Agriculture*, and the *Department of the Interior* have their quarters in the **Langevin Block* or *New Departmental Building* (Pl. D, 3), a handsome and substantial structure at the corner of Wellington St. and Elgin St., constructed in 1883 at a cost of \$787,000. [Plans are now being prepared for a new Departmental block on the E. side of Major's Hill Park, bounded by Mackenzie Ave.,

Sussex St., Rideau St., and St. Patrick St. (comp. Pl. D, E, 3)] The *Government Archives*, a valuable and interesting series of which has been edited, calendared, and published, are housed in a new building in Sussex St. (see p. 180). The department of *Militia* has its headquarters in *Wood's Building* (Pl. D, 3), Slater St. — The only part of the interior of the Dominion Buildings on which adornment has been lavished is the "Library" (A. D. De Celles and M. J. Graffin, joint librarians), which is one of the most beautiful and convenient structures for its purpose in America. It now contains 250,000 vols., including many on Canada, and is free to the public as a reference-library (9-4). The book-cases and panelling are of Canadian pine, adorned with excellent carving and the arms of the Dominion and provinces. The library, which is lighted by electricity, also contains a statue of Queen Victoria and busts of King Edward and Queen Alexandra.

The central Tower affords a fine "View of Ottawa, the river, the Chaudière Falls, etc. — Good views are also obtained from the walks laid out in the Parliament Hill grounds, especially from the so-called "*Lovers' Walk*", skirting the outside of the bluffs, and from the harbour behind the library. In the W. part of the grounds are statues of *Queen Victoria* (erected in 1900 to commemorate the sixtieth anniversary of her accession), *Alexander Mackenzie* (1722-92), and *Sir George Etienne Cartier* (1814-73), while on the E. side is one of *Sir John Macdonald* (d. 1891). All of these are by Hébert (with the help of Hamilton MacCarthy in that of Mackenzie). Nervous visitors should note that a time-gun is fired at noon near the Macdonald statue.

The modest little building at the S.W. corner of Parliament Hill is occupied at present by the *Supreme Court of Canada* (Pl. C, 3), until more worthy permanent quarters are prepared for it.

In winter the river below the Parliament Buildings is frozen hard, and trotting-races and other sports are held on it.

Parliament Square is separated from WELLINGTON STREET (Pl. B-D, 3), with its handsome banks and offices, by a low stone wall with fine iron-work railings and gates. In Wellington St., opposite the main entrance to the Parliament Grounds and the end of Metcalfe St. (Pl. D, 3), is a figure of *Sir Galahad*, by Keyser, erected to commemorate the gallant self-sacrifice of Henry A. Harper in 1901.

The pretty little "*Major's Hill Park*" (Pl. D, 2, 3), to the E. of Parliament Hill, commands good views of the river. It contains a monument to two Ottawans who fell in the Riel Rebellion (p. 242). On *Nepean Point*, at the end of Major's Hill Park, is the *Saluting Battery* (guns of 1797). At this point the Ottawa is crossed by the imposing "*Royal Alexandra or Interprovincial Bridge*" (Pl. D, 1, 2), completed in 1902 at a cost of \$1,250,000. It is composed of one cantilever span (556 ft. long), two anchor arm spans (each 247 ft. long), and two truss spans (247 ft. and 140 ft.). It comprises a single railroad-track, two tramway-tracks, and two roadways. A walk across this bridge and back is recommended for the fine views it affords.

At the S. end of Major's Hill Park the *Rideau Canal* (p. 177) is crossed by the *Dufferin Bridge* and the *Sappers Bridge* (Pl. D, 3), forming an acute angle with each other. From the former a striking view is obtained of the six locks by which the canal makes its final descent to the Ottawa River.

Following SUSSEX STREET (Pl. D, 2, 3) to the left (N.) from the end of the Sappers Bridge, we soon reach the office of the *Geological Survey of Canada* (Pl. D, 3), containing a very interesting and unusually well-arranged "*Museum*" (open, free, 9-4). Director, *Mr. A. P. Low*.

Farther out, in the same street, in the midst of a French population, is the Roman Catholic Cathedral of **Notre Dame**, or the *Basilica* (Pl. D, E, 2), with its twin towers, 200 ft. in height. It contains a painting ascribed to *Murillo*. In front of it is a *Statue of Bishop Guigues*, first Bishop of Ottawa (1848-74). — Nearly opposite is the *Government Printing Bureau*, a large brick building (King's Printer, *Dr. S. E. Dawson*). A little farther on are the *Grey Nunnery* (r., Pl. D, E, 2), the new *Archives* (l.; Pl. D, 2), and the new *Mint* (l.; Pl. D, 2).

Beyond the *Mint* *Sussex St.* (tramway) bends to the right, and we reach the point where the *Rideau* forms the pretty little 'curtain-like' *Rideau Falls* (30 ft. high, Pl. F, 1) as it joins the *Ottawa*. [To see them we have to pass through a lumber-yard; they are best seen from a boat on the *Ottawa*.] Adjacent is the *Edwards Saw Mill*, a visit to which is full of interest. — Crossing the bridge and following the prolongation of *Sussex St.*, we soon reach the grounds of ***Rideau Hall** (Pl. G, 1), the residence of the Governor-General of Canada.

Rideau Hall is a large, rambling, and plain but comfortable edifice. The grounds are pretty, but not so fine as those of *Spencer Wood* (p. 155). They contain a *Skating Pond* and *Toboggan Slide*, which present a very gay and lively scene in winter. The *Princess Vista*, cut through the woods at the instance of the *Princess Louise*, affords a charming view of the *Ottawa* and the mountains beyond it.

Another pleasant route to or from *Rideau Hall* is afforded by *King Edward Avenue* (Pl. E, 1-4) and the *Minto Bridges* (Pl. F, 1).

Earnscliff, on the cliffs overlooking the river, near the lodge of *Rideau Hall*, was the home of *Sir John Macdonald* (p. 179) in his later years.

From *Rideau Hall* we may go direct by tramway (p. 176) to the **CHAUDIÈRE BRIDGE** (Pl. B, 2), just above which are the fine ***Chaudière Falls**, where the *Ottawa*, narrowed to about 200 ft., descends 50 ft. over ragged ledges of rock.

The water-power here is used by countless *Saw Mills*, a visit to one of which will be of great interest to the visitor unacquainted with the marvellous perfection and delicacy of the machinery for converting rough forest-trees into thin yellow planks and shingles. Thousands of logs are floating in the adjacent 'booms'; and the surface of the smoother parts of the river is covered with saw-dust shining like gold in the sunlight. It is estimated that there are usually 125,000,000 ft. of lumber on the *Chaudière* 'piling grounds'.

Near the falls are the *Timber Slides*, by which the lumber from the upper river descends to the navigable water below. The squared logs are made up into 'cribs' just fitting into the slides; and it is one of the recognized items of a visit to *Ottawa* to 'run the slides' as a passenger on one of these rafts. This is an exciting experience, unattended by danger, and permission to go down is easily obtained from those in charge.

On the opposite side of the river here (in the province of *Quebec*), is the suburban town of *Hull*, with (1901) 13,993 inhab., most of whom are connected in one form or another with the lumber-industry or with the large *Eddy Pulp and Paper Mills*. It is connected by electric tramway with *Ottawa* (via the *Interprovincial Bridge*, p. 179) and with *Aylmer* (p. 182). Railway stations, see pp. 175, 182. Near *Hull* are the large works of the *International Portland Cement Co.*

At the corner of *Queen St.* and *O'Connor St.* stands the building (Pl. C, D, 3) which is occupied, in somewhat curious juxtaposition, by the **National Art Gallery** and the **Fisheries Exhibit** (open, free, 10-5, on Sat. 10-2). [A large new building, the *Victoria National*

Museum, is in course of erection in Appin Place (Pl. D, 5), at a cost of \$1,250,000, and is intended to house all the national collections.]

The *Fisheries Exhibit* occupies the ground floor and the basement, the process of breeding and hatching fish being shown in the latter.

The *National Art Gallery* is small and contains chiefly Canadian works. Among its contents are *Time, Death, and Judgement*, by *G. Watts*, *R. A.*, a small painting by *Maratta*; a portrait of Miss Montalba, the artist, by the *Princess Louise*; portraits of Sir John Macdonald (by *Patterson*), the Marquis of Lorne (by *Millass*), and Dr. Kingsford, the historian (by *C. E. Moss*), *Mortgaging the Homestead*, by *G. A. Reid*; *Cape Trinity* (p. 170), by *L. R. O'Brien*, a copy of *West's Death of Wolfe*; *Beacon Light in the Harbour of St. John's*, by *H. Sandham*; *Teacher talking over the Trustees of a Back Settlement School*, by *R. Harris*, *Death of Nelson*, by *G. P. Reinagle*, *Nude girl*, by *Paul Peel*, *Al fresco concert*, by *E. W. Grier*, *Shipping*, by *J. Hammond*; *Ambuscade*, by *Roy*; *C'est toujours le même Chanson*, by *Paul Guillet*; *The Charge*, by *H. Charlier*, *Group* by *H. Tenkate*; *Westminster*, by *F. Knowles*; *Dreaming*, by *G. A. Reid*; and landscapes by *John A. Fraser*, *O. R. Jacobi*, *Mower Martin*, *Melbye*, *Homar Watson*, *Wm. Raphael*, *F. M. Bell Smith*, *R. O'Brien*, *F. S. Challener*, *Wm. Hope*, and *Forshaw Day*.

Among the other principal buildings of Ottawa not yet mentioned are the **Carnegie Library* (Pl. D, 4), at the corner of Laurier Ave. and Metcalfe St., opened in 1906 (librarian, *Mr. Burpee*), *Ottawa University* (Pl. E, 4), a Roman Catholic institution with 500 students (including the academy), rebuilt since a destructive fire in 1903, the *Normal School*, the *Drill Hall* (with a museum of military relics), and the *Collegiate Institute*, all in Cartier Square (Pl. D, 4); the *City Hall* (Pl. D, 3), with a *Boer War Monument* in front of it; the *Court House* and *Gaol* (Pl. E, 3); the *Lady Stanley Institute* (Pl. G, 3); the *Contagious Diseases Hospital* (Pl. F, G, 5), and various other *Hospitals* and *Nunneries*. — The *Water Works* (Pl. B, 3) are interesting. — **Rockcliffe Park*, 1½ M. to the N.E. of the city limits, is reached by a charming road leading from the entrance to Rideau Hall through green fields and shady groves (tramway 5 c.). It affords beautiful views of the Ottawa and is about to be greatly extended. About 2 M. to the E. of it is the *Dominion Rifle Range*, the scene of the annual meeting of the Dominion Rifle Association, where the crack shots are chosen for the team that represents Canada at the international shooting-contest at Bisley (England). — *Lansdowne Park*, at the opposite end of the city, is the scene of the Central Canada Annual Exhibition, the chief lacrosse-matches, etc. It is best approached by the beautiful new **CANAL DRIVEWAY*, beginning at Cartier Sq. (Pl. D, 4) and skirting the Rideau Canal, but it may also be reached by tramway (5 c.) or canal-steamer (10 c.). — *Strathcona Park* (Pl. G, 4) is new; and the *Ottawa Improvement Commission* is hard at work in beautifying the city in various other ways.

About 1 M. to the S.W. of the city lies the **Central Government Experimental Farm* (467 acres), where information can be obtained as to the soil and vegetable productions of the various parts of the Dominion. It is situated on high ground and affords some fine views. The farm is open to visitors daily, the buildings daily except Sunday. Director, *Dr. William Saunders*. It is pleasantly reached via the extension of the just-mentioned Driveway. The electric tramway ends about 1 M. from the farm. Some idea of the extent to which the work of the farm comes into

contact with farmers throughout Canada may be gathered from the fact that in 1901 no fewer than 55,366 letters were received and 376,196 letters, bulletins, and reports were sent out — On the grounds of the farm is the **Dominion Astronomical Observatory**, a substantial stone building, the admirable equipment of which includes a 15-inch equatorial telescope. Director, *Dr. W. F. King*. Visitors are admitted on week-days, 9.30 to 4.30, and on Sat. evening after dark. — Among other points of interest in the environs are the *Sulphur Springs*, 5 M. from the city, on the road to Montreal; the *Cascades of the Gatineau River* (10 M.), reached by road or railway; *Kettle Island Park*, 2 M. distant (steamer at frequent intervals); *Britannia* (see below); and *Aylmer* (see below) — Good shooting and fishing can be obtained within easy access of Ottawa (comp. pp. li, lv, lvi).

From Ottawa to *Montreal*, see R.R. 31, 37; to *Winnipeg*, etc., see R.R. 43-54; to *Parry Sound*, see R. 41; to *Kingston* via the *Rideau Lakes*, see R. 36.

From Ottawa to Toronto, 256 M., *Can. Pac. Railway* in 8-9 hrs. (fare \$7.85, parlor-car \$1, sleeper \$2) — From Ottawa to (46 M.) *Smith's Falls*, see below; thence to (256 M.) *Toronto*, see pp. 186-188.

From Ottawa to Prescott, 52 M., *Canadian Pacific Railway* in 2-3 hrs. (fare \$2.10) At (31 M.) *Kemptville Junction* (p. 186) we intersect the C. P. R. line from Montreal to Toronto (see R. 38a). — 52 M. *Prescott*, see p. 229.

From Ottawa to Waltham, 81 M., *Canadian Pacific Railway* in 3¼ hrs. (fare \$2.80). — This line follows the N. bank of the Ottawa above the capital. — 10 M. *Aylmer* (*Victoria*, \$2-3; *Brown Ho.*, *Kennedy Central*, \$1½), on *Lake Deschênes*, with (1901) 2204 inhab. is a favourite resort of the Ottawans. It may also be reached by electric railway (p. 176) *Queen's Park* here offers various popular attractions. Steamer to *Britannia*, see below. — 69 M. *Fort Coulonge* lies nearly opposite *Pembroke* (p. 231). — 81 M. *Waltham*.

From Ottawa to Maniwaki, 83 M., *Can. Pac. Railway* in 3¼-6 hrs (fare \$2.70) This line ascends the pretty *Gatineau Valley*, with its wealth of lumber and sporting facilities. — The train crosses the Interprovincial Bridge (p. 179) to (2 M.) *Hull* (p. 180) 9 M. *Chelsea*; 13 M. *Kirk's Ferry*; 17 M. *Cascades*; 23 M. *Wakefield*; 31 M. *Farrellton*; 36 M. *Low*; 48 M. *Kazabazua*; 50 M. *Aylwin*; 60 M. *Gracefield* (King Edward, \$1), 63 M. *Blue Sea*, 73 M. *Burbridge* — 83 M. *Maniwaki* (Laurentian, Maniwaki, \$1½) There is some prospect of running a line across from this point to *Nominig* (p. 175).

From Ottawa to Smith's Falls and Brockville, 74 M., *Can. Pac. Railway* in 2¾-4 hrs. (fare \$2.45) — As we leave Ottawa we have good views of the *Ottawa River* to the right, with its burden of lumber. — 5 M. *Britannia*, a summer-resort on a bay of the Ottawa, has a popular park, with a good bathing-beach, boating, a long pier, band-concerts, and vaudeville performances. *Britannia* may also be reached by electric car (p. 176), and a steamer plies across the bay to *Aylmer* (see above). — Farther on we soon lose sight of the river. At (28 M.) *Carleton Junction* (Rail. Restaurant) we diverge to the left (S.) from the transcontinental line (see p. 231). At (46 M.) *Smith's Falls* (Rail. Restaurant) we cross the O.P.R. line from Montreal to Toronto (R. 38a). 53 M. *Wolford*; 69 M. *Fairfield*. — 74 M. *Brockville*, see p. 229.

From Ottawa to Cornwall and Tupper Lake, 129 M., *New York & Ottawa Railway* in 4¾-5 hrs. (fare \$9.50). — This line runs from Ottawa (Central Station) towards the S.E. 5 M. *Hawthorne*; 7 M. *Ramsayville*; 13½ M. *Edwards*; 20 M. *Russell*; 23½ M. *Embrun*; 27½ M. *Cambridge*. At (31½ M.) *Crysler* we cross the *Petite Nation* and at (38 M.) *Finch* (p. 186) we intersect the C. P. R. (R. 33a). 42 M. *Newington*; 48½ M. *Black River*. — At (57 M.) *Cornwall* (see p. 229) we cross the *St. Lawrence* and enter *New York State*. 63½ M. *Helena*; 74½ M. *Moirs*; 86 M. *St. Regis Falls*; 97 M. *Spring Cove*; 107 M. *Brandon*. — From the present terminus, (129 M.) *Tupper Lake*, in the *Adirondack Mts.*, this line is to be eventually extended to *North Creek*, where it will join a continuous railway route to *New York* (comp. *Baedeker's United States*).

36. From Ottawa to Kingston by Steamer.

145 M. STEAMER OF THE RIDEAU LAKES NAVIGATION CO., thrice weekly in 26 hrs (fare \$ 3.80; berth \$ 1 50; meals 75 c. each).

This is a favourite tourist-route, passing through some fine scenery and no less than 36 locks. The *Rideau Lakes* consist of a chain of ten lakes, through which the steamer passes. They were used by the British Government in the war of 1812 for the transport of military supplies, and in 1832, by the deepening of the connections between the lakes, and the building of the locks, the lake-system was made available for navigation all the way from Ottawa to Kingston, on Lake Ontario. The excellent duck-shooting and bass-fishing of the district attract many sportsmen and anglers. Fair accommodation may be had at many of the villages *en route*.

Ottawa, see p. 176. On leaving the Canal Basin we pass *Lansdowne Park* (p. 181). At (4 M.; r.) *Hogsback* (so called from the shape of the ridge skirted by the canal or from the many rounded boulders in the stream) we quit the canal, pass through two locks, and enter the *Rideau River*. — 8 M. (l.) *Black Rapids*, with a lock and an immense dam. From (16 M.) *Long Island* to (44 M.; r.) *Burritt's Rapids* (O'Neill House, \$ 1½) we steam through *Long Reach*, affording the longest continuous run of the route (28 M.) — 49 M. (r.) *Merrickville* — The district near (57 M.; r.) *Kilmarnock* is a noted duck-shooting ground.

65 M. (r.) *Smith's Falls* (see p. 186) lies nearly halfway from Ottawa to Kingston. Beyond Smith's Falls we thread the so-called 'Narrows', passing (74 M.) *Rideau Ferry*, and enter ***Big Rideau Lake**, 21 M. long and 6 M. wide, with its numerous islands. About halfway down the lake the steamer turns to the left, enters *German Bay*, and calls at (86 M.; l.) *Portland* (Garrett's Rest, Commercial House, \$ 1½-2), a pleasant summer-resort. Beyond German Bay we pass through another cut, also known as the 'Narrows', and enter **Little or Upper Rideau Lake**, 6 M. long, 495 ft. above the sea, and 225 ft. above Lake Ontario — 97 M. *Westport* (several boarding-houses), the terminus of the Brockville and Westport Railway (see p. 188), is a flourishing little village on the W. shore of Little Rideau, with *Wolfe Lake* to the W. of it. Leaving Westport, the steamer retraces its way across the lake to (103 M., l.) *Newboro* (New Rideau, \$ 2-3), between the Little Rideau and *Mud Lake*, which marks the ridge of a watershed, the waters in one direction running towards Kingston and in the other towards Ottawa. It is a favourite resort of sportsmen and anglers.

115 M. (l.) *Jones Falls* (Hotel Kenny, \$ 1½-2), at the end of *Sand Lake*, is one of the most attractive spots on the route. There are four deep locks, and a fine horseshoe-shaped dam 400 ft. long and 100 ft. high, constructed at a cost of 80,000*l.* The falls from which the town takes its name are small but picturesque. — After leaving Jones Falls we pass through the small *Whitefish Lake*, and come to *Little* and *Big Cranberry Lakes*, the last of the chain.

At (127 M.; l.) *Brewer's Mills Locks* we enter a stretch of 10 M. formed by backing up the waters of the *Cataraqui River*, and known

as the 'Drowned Lands'. The channel is narrow and rocky, and at one place a rock, supposed to resemble the profile of the Duke of Wellington, projects from the bluff.

Entering the Cataraqui River proper, remarkable for its winding course and beautiful scenery, we pass (139 M.; 1.) *Kingston Mills*, and reach —

145 M. *Kingston* (see p. 227).

Connection is made here with a steamer crossing the St. Lawrence to *Clayton*, New York State (see *Baedeker's United States*)

37. From Ottawa to Montreal by Steamer.

130 M. STEAMER 'EMPRESS' OF THE OTTAWA STEAM NAVIGATION Co. daily in summer, starting about 8 a.m., in 10½-11 hrs. (fare \$2 50; return-fare \$4; round trip, allowing one way by railway, \$5, meals extra). In the reverse direction passengers leave Montreal by train at 8 a.m. and join the boat at *Lachine* (p. 230), and the trip thence to Ottawa takes about 10 hrs. The trip downstream is, however, preferable, as it includes the exciting passage of the Lachine Rapids (see p. 230). The steamers are comfortable and contain fair restaurants — A local steamer ('Victoria') also plies from Ottawa to *Thurso*, starting at 4 p.m. and returning next morning (fare 25 c.; round trip to *Cumberland* by the 'Victoria' and back by the 'Empress' 40 c.).

The *Ottawa*, the *Grand River* of the early voyageurs, is the largest tributary of the St. Lawrence, being 615 M. long and draining an area of 80,000 sq. M. It rises in the W. part of the province of Quebec, about 200 M. in a direct line to the N. of Ottawa, and flows first for 180 M. towards the W., then to the S., S.E., and E., thus making a large U-shaped loop open to the E. It forms the boundary between Quebec and Ontario for about 400 M., and falls into the St. Lawrence at the Isle of Montreal. The *Ottawa* is navigable for 250 M., the rapids and falls being avoided by canals. It is very picturesque and is fringed with magnificent forests, yielding some of the finest timber in the world. Some of the numerous tributaries are of considerable size.

Ottawa, see p. 176. As we leave the wharf we have a good view of the *Chaudière Falls* (p. 180) and the *Parliament Buildings*. Large lumber-yards line the banks. About 1 M. below the city the *Ottawa* is joined on the left (N.) by the *Gatineau*, a strong and important lumbering-stream. — 8 M. (l.) *East Templeton*. — 20 M. (r.) *Cumberland*. — 21 M. (l.) *Buckingham* (p. 175); the village lies on the *Livière*, 4 M. above the steamboat-landing. — 25 M. (r.) *Rockland* (Toque's Hotel), with saw-mills. — 29 M. (l.) *Thurso* (Ottawa Beach Boarding House). The *Thurso Islands* are a favourite resort of excursionists. A little farther on we pass the mouth of the *North Nation* (p. 175), opposite which is that of the smaller *South Nation*. — 35 M. *Wendover*. — 40 M. *Treadwell*.

41 M. (l.) *Papineauville* (Chabot's Hotel) was named for Louis Joseph Papineau (see below). — 46 M. (l.) *Montebello* (hotel and boarding-houses) contains the pretty tree-shaded château in which *Louis Joseph Papineau* (d. 1871), the leader, in Lower Canada, of the unsuccessful rebellion of 1837-8 (see p. 192), lived after his return from banishment. Most of the reforms for which he fought were afterwards secured by constitutional means; but after his pardon, he, unlike his fellow-leader Sir George Cartier (p. 179), lived in

retirement and took comparatively little part in politics, though he was a member of the legislative assembly from 1848 to 1854. — 59 M. (r.) *L'Original* (Ottawa Hotel; *L'Original Hotel*) is the landing-place for (10 M.) *Caledonia Springs* (p. 174; carr to meet steamer on application to Manager of the Caledonian Springs Hotel).

64 M. (l.) *Grenville* (p. 175), which we reach about noon, lies at the head of the *Long Sault*, *Chute au Blondeau*, and *Carillon Rapids*. Vessels avoid the rapids by two short canals; but the steamboat-passengers, to prevent delay, are transferred by a broad-gauge railway (5 ft. 6 in.) from Grenville to (13 M.) *Carillon*, where another steamer ('Sovereign') meets them. The Ottawa is crossed here by the bridge of the Canadian Northern Quebec Railway from Joliette to Hawkesbury (p. 142).

The river at this part of its course is very deep and narrow, and its banks are steep. The Long Sault Pass is hallowed by the memory of the young *Daulac* or *Dollard*, *Sieur des Ormeaux*, and his sixteen comrades, who here laid down their lives to save *Ville Marie* (p. 129). The Iroquois had determined to drive the French into the sea, but the obstinate resistance offered by the gallant little body of Frenchmen in the small palisaded fort they erected on the S bank of the river here, about halfway between Grenville and Carillon, daunted them so that they gave up the enterprise. About 800 Indians joined in the attack, and every one of the Frenchmen perished. Comp. the ballad by *Mt. George Murray*. — On the S shore lies *Hawkesbury* (p. 174).

77 M. (l.) *Carillon* (Sovereign Hotel; Kelly's, Bellevue Boarding House, well spoken of) lies at the foot of a small hill affording a charming view (golf-links). Below this point both banks are in the province of Quebec. A little farther on the Ottawa expands into the pretty **Lake of Two Mountains*, which extends hence, with a width of 3-5 M., all the way to the Island of Montreal. — 82 M. (r.) *Rigaud* (p. 174). — 88 M. (l.) *Pointe aux Anglais*. — 92 M. (r.) *Hudson* (Hudson-on-the-Lake Hotel). — 93 M. (l.) *Como* (Pens. Brasseur), a summer-resort.

94 M. (l.) *Oka* (hotels and boarding-houses), a village inhabited by some remnants of the Iroquois and Algonquin Indians, lies on the N bank, at the base of the 'Two Mountains' which give name to the lake. *Mt. Calvary*, the higher of the two, is ascended by a 'Route de Calvaire', with shrines marking the seven 'Stations of the Cross' (fête and pilgrimage on Sept. 14th). On the other hill is a *Trappist Monastery*, the monks of which, living under the most rigidly ascetic rules, cultivate a large farm. Their cheese ('Port du Salut') has a wide reputation. Stages meet the steamer to take visitors to the monastery, to which, however, men only are admitted.

The lake now expands, and the river divides into the four channels through which it joins the *St. Lawrence*, forming the islands of *Perrot*, *Montreal*, and *Jesus*. We follow the main channel, between the isle of Perrot on the right and that of Montreal on the left.

103 M. (l.) *Ste. Anne du Bout de l'Île* or *de Bellevue* (¹ *Clarendon Hotel*, \$2-3; *Raymond, Canada, Ste. Anne*, \$1-1½), a quaint and picturesque French village with about 350 inhab., situated at the W.

end of the Isle of Montreal, has been immortalized by Moore's 'Canadian Boat Song'. The little white church near the canal is the one to which Moore refers, while the house in which the poet lived is also shown. Just beyond are the picturesque remains of *Château Boisébriant* or *Senneville* (1699), in the grounds of Sir John Abbott (d. 1893), late premier of the Dominion. Ste. Anne, which is also a station of the C. P. R. (see below) and the G. T. R. (see p. 188), affords good boating, fishing (black bass, maskinonge, and doré or wall-eyed pike), and shooting (ducks and partridges). It attracts many summer-visitors, and near it are the summer-homes of several wealthy Montrealers. — The steamer now passes a short canal, with one lock, shoots under two railway-bridges, and reaches *Lake St. Louis* (p. 230).

121 M. (1.) *Lachine*, and thence via the **Lachine Rapids* to —

130 M. (1.) *Montreal*, see R. 47.

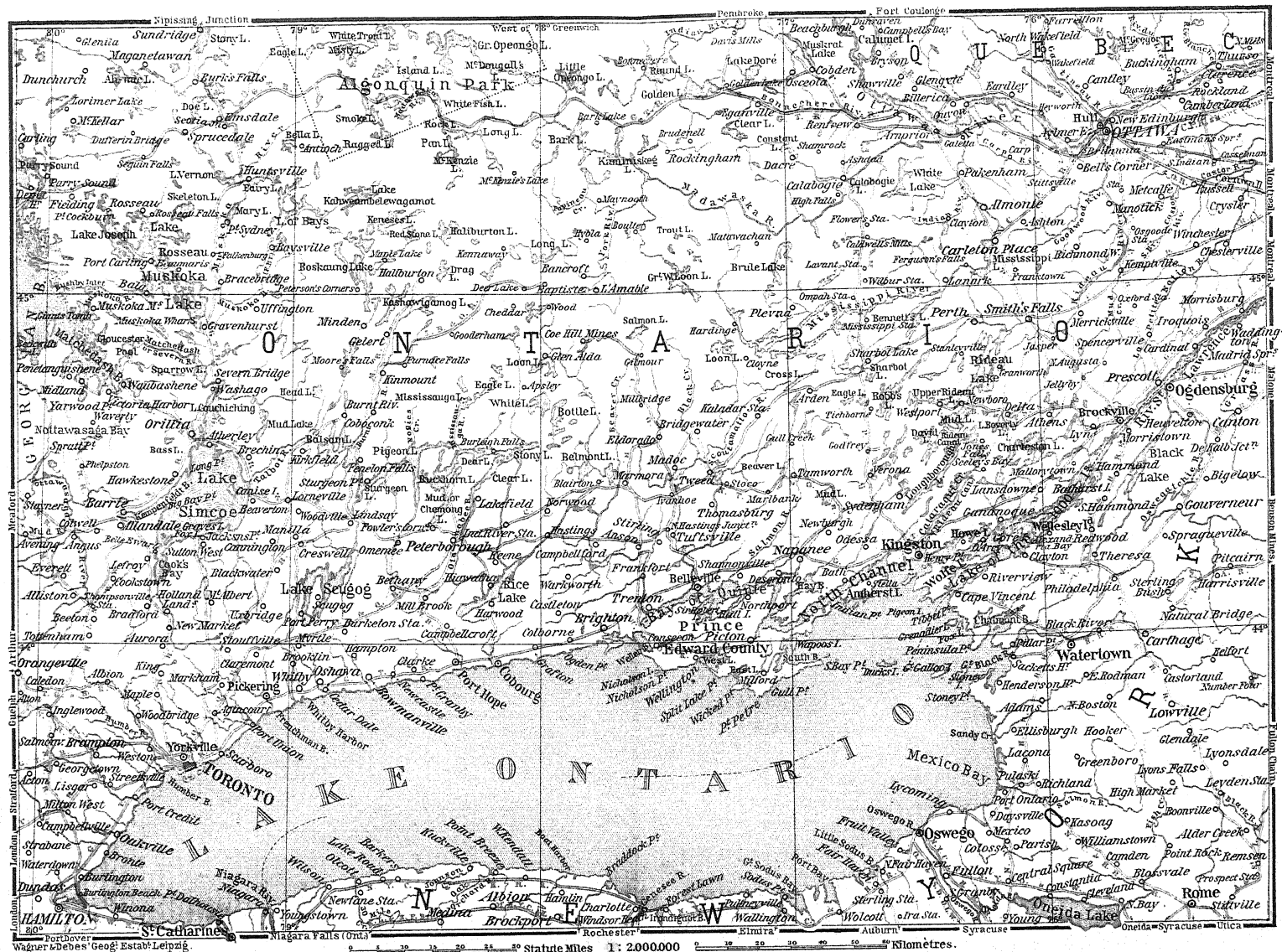
38. From Montreal to Toronto.

a. Via Canadian Pacific Railway.

338 M. RAILWAY in 10-11 hrs. (fare \$10; sleeper \$2, parlor-car \$1) Buffet-cars on all trains. Through-tickets are issued to western points via Toronto by the 'Lake Route' (see R. 46); these are interchangeable with direct railway-tickets (see R. 48).

Montreal (Windsor St. Station), see p. 125. As we leave we have a good retrospect of the city (left). At (5 M.) *Montreal Junction* (p. 48) the line to Boston diverges to the left (see p. 19). A little farther on we see *Lachine* (p. 230) and the St. Lawrence Bridge of the C. P. R. to the left. 10 M. *Dorval*, with golf-links (p. 127). At (21 M.) *Ste. Anne de Bellevue* (p. 185) we cross one of the arms of the *Ottawa* and leave the *Island of Montreal*, and at (24 M.) *Vaudreuil* (Central Hotel) we cross another mouth of the *Ottawa*. This is the diverging point of the 'Short Line' to *Ottawa* (R. 34a). Our line now leaves the river and runs towards the S.W. through the fertile district between the St. Lawrence and the *Ottawa*. Many orchards and tracts of woodland are passed. At (41 M.) *St. Polycarpe Junction* we cross the Grand Trunk Railway (p. 176). Near (47 M.) *Dalhousie Mills* we enter *Ontario* (p. 192). 63 M. *Apple Hill*. At (79 M.) *Finch* we intersect the 'New York & Ottawa Railway' (p. 182). 87 M. *Chesterville*; 93 M. *Winchester*. At (108 M.) *Kemptville Junction* we intersect the C.P.R. line from *Ottawa* to *Prescott* (see p. 182), and at (120 M.) *Merrickville* we cross the *Rideau River* by a long iron bridge.

129 M. *Smith's Falls* (*Rideau*, \$2; *Russell Ho.*, \$1½; *Rail. Restaurant*), a brick-making and manufacturing town of (1901) 5155 inhab., on the *Rideau Canal* (see p. 183), is the junction of lines to the S. to *Brockville* (p. 229) and to the N. to *Carleton Junction* (for *Ottawa* and the main transcontinental line of the C.P.R.). To the left lies *Big Rideau Lake* (p. 183). — 141 M. *Perth* (*Hicks Ho.*, \$1½), a small town with (1901) 3588 inhab., several mills, a manufactory of



railway rolling-stock, and some good quarries and phosphate-mines. The country traversed is unattractive. — From (166 M.) *Sharbot Lake Junction* lines run to the S. to *Kingston* (p. 227) and to the N. to *Renfrew*. Good shooting is obtained here (comp. p. 17) and the scenery is attractive, with lakes on both sides of the railway. — 207 M. *Tweed* (Hoyck's Hotel, \$ 1½; 1168 inhab.), on the *Moir*, is the junction of a line to *Napanee* (p. 189) and *Kingston* (p. 227). To the left lies *Lake Stoco*. At (216 M.) *Ivanhoe* we cross a branch of the G.T.R.; and at (225 M.) *Central Ontario Junction* we intersect the Central Ontario Railway, running from *Picton* (p. 189) and *Trenton* (p. 189) to various iron-mines in the N. 238 M. *Havelock*, a railway divisional point, with (1901) 984 inhab.; 244 M. *Norwood* (King's; McGregor's), with (1901) 945 inhabitants.

262 M. *Peterborough* (*Oriental Hotel*, \$ 2-2½, *National*, \$ 1½-2; *U. S. Agent*), an important railway-centre and industrial city, with (1901) 11,239 inhab., lies on the *Otonabee*, which here descends 150 ft. within a few miles and affords the motive power for numerous mills, large electrical engineering works, and other manufactories. The country of which this is the focus is full of pretty lakes and rivers, offering much to attract both tourist and sportsman. The so-called 'Rice Lake' or 'Peterborough' canoe originated here.

Peterborough also lies on the so-called *Trenton Waterway* (p. 189); and the *Hydraulic Lift Lock* here is the largest in the world and of great interest to engineers. The lock consists of two huge steel chambers or pontoons (140 ft. by 33 ft.), working up and down between guiding towers. The vessel enters one of the chambers and is raised 65 ft. by loading down the other chamber with water. The operation takes 12 minutes.

Rice Lake (*Jubilee Point Hotel*, \$ 1), with its maskinonge and bass fishing, lies about 10 M. to the S.E. This district was the headquarters of the *Mississauga Indians*, a branch of the Ojibwas.

FROM PETERBOROUGH TO LAKEFIELD, 9 M., *Grand Trunk Railway* in ½ hr. This line forms the shortest approach to the picturesque district of the *Kawartha Lakes* (600 ft. above Lake Ontario), which is now rapidly coming into favour as a shooting, fishing, and summer resort — *Lakefield* (*Lakefield Ho.*, \$ 1½) lies at the point where the *Otonabee River* begins to expand into *Lake Katichewanooka*, the first of the *Kawartha Lakes*, and is the starting-point of a steamer which plies through the whole chain of lakes to (70 M.) *Coboconk*, at their W. extremity (see p. 188).

STEAMER ROUTE ON KAWARTHA LAKES. On leaving Lakefield and Lake Katichewanooka, the steamer enters *Clear Lake* (lock) and calls at *Young's Point* (Lakeview Ho., Carleton Ho., \$ 1). — From *Clear Lake* we pass into *Stony Lake*, with its 800 islands and the resorts of *Halls Glen* (Victoria Ho., \$ 1½-2), *Stony Lake*, the *Mt. Julian Hotel* (\$ 1), and the *Vivande* (\$ 2). — In passing from *Stony Lake* into the E. bay of *Buckhorn Lake* we call at *Burleigh Falls* (Inn, \$ 1½). At the narrow strait leading to the main part of the lake are *Hall's Bridge* (l., *Buckhorn Hotel*, \$ 2) and the *Buckhorn Falls* (r.) — Through the *Gannon Narrows* we next reach *Pigeon Lake*, with some large wooded islands — *Bobcaygeon* (Royal, Rockland, Beachwood, \$ 1½-2), one of the chief resorts on the lakes (see also p. 188), lies on an island between *Pigeon Lake* and *Sturgeon Lake*. Here the steamer calls at *Sturgeon Point*, *Pleasant Point*, and *Fenelon Falls* (Hotel *Kawartha*, \$ 2-5; railway, see p. 188) — We next cross the smaller *Cameron Lake*, reached by a lock with a rise of 23 ft., and from this we pass into *Balsam Lake*, at the entrance to which lies *Rosedale*, a good camping and fishing place. The steamer now turns to the N. and reaches the end of the route

at *Coboconk* (Pattie Ho., § 1), which is also the terminus of a railway running to *Lorneville Junction* (p. 190) and *Scarboro Junction* (p. 190)]

FROM PETERBOROUGH TO HALIBURTON, 79 M., *Grand Trunk Railway* in 5 hrs. This line diverges to the right at (23 M.) *Lindsay* (Benson Ho., § 1½ 2; U. S. Agent; pop. 7038 in 1901) from another line going on to Lake Simcoe (p. 198), and runs to the N. through the district of the *Kawartha Lakes* (see p. 187). Steamers ply from Lindsay via the *Scugog River* to various points on the lakes. — 30 M. *Cameron*, on *Sturgeon Lake* (see p. 187) At (37 M.) *Fenelon Falls* (see p. 187) we cross the strait connecting *Sturgeon Lake* with *Cameron Lake* 43 M. *Burnt River*, 56½ M. *Kinmount*; 66 M. *Gelert*, 72 M. *Dysart* — 79 M. *Haliburton* (Queen's, *Grand Central*, § 1)

A stage also runs from Peterborough to (6 M.) *Chemong Park* (Hotel, § 1½), on *Chemong Lake*, the southernmost of the *Kawartha Lakes* (p. 187).

The district now traversed is fertile and highly cultivated. Near (280 M.) *Manvers* we cross a branch of the G.T.R. From (292 M.) *Burketon Junction* a branch-line runs to *Lindsay* (see above) and (39 M.) *Bobcaygeon*, forming another convenient approach to the *Kawartha Lake Region* (see p. 187). 301 M. *Myrtle*, near *Lake Scugog*, is the junction of lines to *Whitby* (p. 190), *Port Perry* (a summer-resort on Lake Scugog, with the *Sebert* and *St. Charles* Hotels), *Manilla*, etc. 318 M. *Locust Hill*, 334 M. *Leaside Junction*.

338 M. *Toronto*, see R. 39.

b *Viâ Grand Trunk Railway.*

338 M. RAILWAY in 7½-11 hrs. (fares as at p. 183). The best train is the 'International Limited', starting at 9 a.m. This line skirts the *St. Lawrence* and *Lake Ontario* for a great part of its course.

Leaving *Montreal* (*Bonaventure Station*; p. 125), the train runs to the W., passing (2 M.) *St. Henri* (p. 14) and (7 M.) *Convent*. At (8 M.) *Lachine*, where we have a fine view of the C.P.R. bridge (p. 47) to the left, we pass under the C. P. R. Farther on we hug the broad *St. Lawrence*. The country is flat and fertile. The C.P.R. runs parallel with our line for some distance. 20½ M. *St. Anne's* (p. 185); the village lies mainly to the left. At (24½ M.) *Vaudreuil* (p. 186) we cross an arm of the *Ottawa*. At (37 M.) *Coteau Junction* the lines to *Ottawa* (p. 176) and to *Valleyfield* (p. 16) and *St. Albans* (p. 15) diverge to the right and left. Our line continues to skirt the *St. Lawrence*, of which we have fine views to the left. 54 M. *Lancaster*. At (67 M.) *Cornwall* (p. 229, Rail. Restaurant) we connect with the 'New York & Ottawa Railway' (p. 182). 81 M. *Farran's Point*, 92 M. *Morrisburg* (p. 229); 113 M. *Prescott* (p. 229), the starting-point of a ferry to *Ogdensburg* (p. 229) and the junction of a line to *Ottawa* (see p. 182). 125 M. *Brockville* (280 ft.; p. 229), the junction of a line to *Smith's Falls* (p. 186) and *Ottawa* (p. 186). Just before (129 M.) *Lyn* a line diverges to the right for (41 M.) *Westport* (comp. p. 183). — The line now quits the river for a time, running through hop-gardens and grain-fields. 146 M. *Lansdowne*. Beyond (155 M.) *Thousand Islands Junction*, for a short line to (6 M.) *Gananoque* (p. 223), we cross a stream, and at (169 M.)

Rideau we cross the mouth of the *Rideau Canal* (see p. 183). A little farther on we see *Kingston* (p. 227), 2-3 M. to the left, with its church-spires, martello tower, college, fort, etc. 172 M. *Kingston Junction*, for a short line to (3 M.) Kingston. Farther on, the line again bends inland. We cross a pretty little river in entering (198 M.) *Napanee* (Campbell Ho., \$1½-2, U.S. Con. Agent), a grain-trading town with (1901) 3143 inhab., embosomed in trees.

Napanee is the junction of the *Bay of Quinté Railway* to (9 M.) *Deseronto* (*Queen, Deseronto Ho.*, \$1½-2, *U. S. Agent*), a flour and lumber trading town (3527 inhab. in 1901), at the end of the beautiful **Bay of Quinté*, an arm of Lake Ontario. Deseronto is lighted by gas made from the sawdust of its lumber-mills. Near it is the attractive *Forester's Island Park* (hotel).

213 M. *Shannonville*. — 220 M. *Belleville* (*Quinté*, \$2-3; *Anglo-American*, \$1-1½; U. S. Consul, *Mr. M. J. Hendrick*), a busy industrial city of (1901) 9117 inhab., on the N. shore of the Bay of Quinté, of which we have views to the left farther on. It is the junction of a line running to the N. to *Ivanhoe* (p. 187), *Madoc* (27 M.), etc. *Albert College* here has 325 students. The favourite summer-resort of the Bellevillians is at *Mississaga Point* (Hotel, \$1-2), on the other side of the bay. — 232 M. *Trenton* (*Aberdeen, St. Lawrence*, \$1½-2; *Gilbert Ho.*, \$1½), at the mouth of the wide and picturesque *Trent*, the outlet of *Rice Lake* (p. 187), and near the W. end of the Bay of Quinté, is a town of (1901) 4217 inhab. and the junction of the Central Ontario Railway, running to the left to (30 M.) *Picton* and to the right to (7½ M.) *Coe Hill* and other mining-stations.

Picton (*Royal, Tecumseh, Globe*, \$1½, *Germ. Cons. Agent*), a town of (1901) 3698 inhab., lies at the W. end of the *Prince Edward Peninsula*, which encloses the Bay of Quinté (see above). The picturesque and varied shores of the peninsula may be visited by steamer. In the highest part of it is the *Lake of the Mountain*, with no known affluent. At *Big Sandy Bay* (*Glen Island Ho.*, \$1½) are curious white *Sand Banks*, which are encroaching on the land at the rate of 150 ft. every winter. 'The active agent in the movement appears to be the drifting snow which entangles the sand and carries it forward. On the hottest day snow may be found a short distance down' (*Picturesque Canada*).

Trenton is also the starting-point of the so-called *Trenton Waterway*, a mainly natural water-route extending to (200 M.) *Mulland* (p. 199), on Georgian Bay.

Farther on, the line skirts the N. shore of Lake Ontario (p. 208). 241 M. *Brighton*; 249 M. *Colborne*. — 264 M. *Cobourg* (*Arlington, Cedomere, Baltimore, Columbian*, \$2-2½; *Dunham Ho.*, \$1½; *Rail. Restaurant*), a manufacturing town of (1901) 4289 inhab., with car-works and breweries, was formerly the seat of Victoria College (p. 196). A short line runs to the N. to (14½ M.) *Harwood*, on *Rice Lake* (p. 187). — 270 M. *Port Hope* (*Queen*, \$2, *St. Lawrence Hall*, \$1½-2½; U. S. Consul, *Mr. H. P. Dill*) is a brisk little lumber-port with (1901) 4188 inhab. and various industries. A branch-line runs hence to *Peterborough* (p. 187), *Lindsay* (p. 188), and other points; and a steamer plies daily to *Rochester* (see *Baedeker's United States*). — 286 M. *Newcastle*; 290 M. *Boumanville* (2731 inhab. in 1901), 299 M. *Oshawa* (*Queen, Commercial*, \$1½-2, 4394

inhab. in 1901). — 303 M. *Whitby* (2110 inhab. in 1901) is the uncton of a line to (10 $\frac{1}{2}$ M.) *Myrtle* (p. 188) and (33 M.) *Manilla* (for *Lindsay* and *Haliburton*, comp. p. 188). — 309 M. *Pickering*, on a small lake; 316 M. *Port Union* — 324 M. *Scarboro Junction*.

Near Scarboro Junction are *Scarboro Heights* or *Bluffs*, consisting of picturesque clay cliffs descending to *Lake Ontario*, and offering a most interesting instance of inter-glacial action. They lie about $\frac{1}{2}$ M. from the terminus of the Scarboro branch of the Toronto and York Radial Railway (p. 191) and are frequently visited from Toronto. The Toronto Hunt Club (p. 191) is situated here.

FROM SCARBORO JUNCTION TO COBOCONK, 77 M., *Grand Trunk Railway* in 4 $\frac{1}{2}$ hrs — 5 M. *Agtincourt*; 13 M. *Markham*. At (20 M.) *Stouffville Junction* the line to *Jackson's Point* (see below) diverges to the left. 32 M. *Uxbridge*; 42 M. *Blackwater Junction*. At (55 M.) *Lorneville Junction* we cross the line running from *Lindsay* to *Lake Simcoe* and *Midland* (comp pp 187, 188). 60 M. *Eldon*; 66 M. *Kirkfield* — 77 M. *Coboconk*, on *Balsam Lake* (comp p. 187).

FROM SCARBORO JUNCTION TO JACKSON'S POINT, 47 M., *Grand Trunk Railway* in 2 hrs (fare \$2.20). At (20 M.) *Stouffville Junction* our train diverges to the left from the line described above. 32 $\frac{1}{2}$ M. *Mount Albert*; 45 M. *Sutton*. — 47 M. *Jackson's Point* (Lakeview Hotel, Pine Plaza Hotel, \$1 $\frac{1}{2}$), a pretty little village on the shore of *Lake Simcoe*, nearly opposite *Barrie* (p. 198).

328 M. *York*; 329 M. *Golf Grounds*; 331 M. *Queen Street East*, within the city-limits of Toronto.

333 M. *Toronto*, see R. 39.

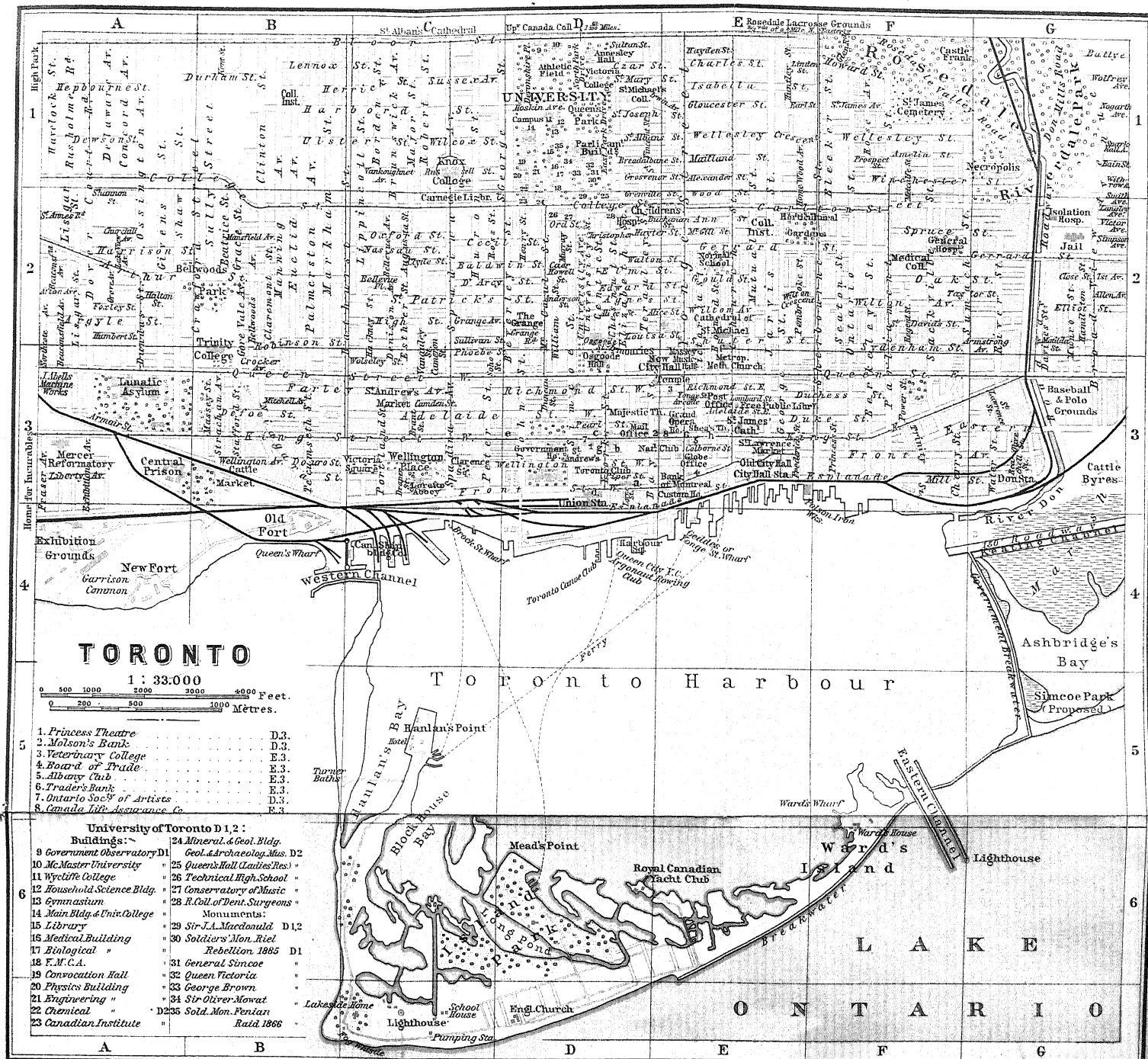
39. Toronto.

Arrival. The *Union Railway Station* (Pl. D, 3, 4) lies on the lake-front, within a stone's throw of all the leading hotels except the *King Edward*. The *Steamboat Wharves* are at the foot of *Yonge St* (Pl. E, 4) [A new and more convenient railway-station, to the E. of the present one, is in contemplation.] — *Hotel Omnibuses* (25 c) and *Cabs* (see below) meet the trains and steamers. Baggage may be sent to the hotels by the transfer-agents or the hotel-porters.

Hotels. **KING EDWARD* (Pl. h, E, 3), at the corner of *King St.* and *Victoria St.*, a large and elaborately fitted-up house, with 400 rooms, from \$3 $\frac{1}{2}$, R. from \$1 $\frac{1}{2}$; **QUEEN'S* (Pl. a, D, 3), pleasantly and quietly situated in *Front St.*, \$3-5; *ROSSIN HOUSE* (Pl. b; D, 3), *York St.*, well spoken of, \$2 $\frac{1}{2}$ -4; **ARLINGTON* (Pl. e; D, 3), cor. of *King St.* and *John St.*, \$2-3, *PALMER HOUSE* (Pl. c; D, 3), cor. of *York St.* and *King St.*, \$2-2 $\frac{1}{2}$, *WALKER HOUSE* (Pl. d, D, 3), cor. of *York St.* and *Front St.*, \$2-3; *IROQUOIS* (Pl. g; D, 3), cor. of *King St.* and *York St.*, R. from 50 c; *ELLIOTT HOUSE* (Pl. f; D, 3), cor. of *Church St.* and *Shuter St.*; *LUCAS TEMPERANCE HOTEL*, to the N.W. of the *City Hall*. Those who wish for quiet should ask for rooms away from the street-car lines.

Restaurants. **McConkey*, 27 *King St. West*; *Grill Room* of the *King Edward Hotel* (see above); *St. Charles Hotel Grill Room*, N.W. cor. of *Yonge* and *Melinda Sts.*, opposite *Traders' Bank* (p. 193); *Nasmith's Lunch Rooms*, 64 & 117 *King St. W.*, 152 & 781 *Yonge St.*, 68 *Jarvis St.*, 470 *Spadina Ave.*, 1408 *Queen St. W.*, etc.; *New Carlton Restaurant*, D. 25 c.; *Railway Restaurant*

Cabs. For cab-hiring purposes the city is divided into three districts, the first bounded by *Bathurst*, *Bloor*, and *Sumach Sts.*, the second by *Dufferin St.*, the *N. City Limits*, and *Pape Avenue*, the third by the *Municipal Limits*. Cab within Division I, with one or two horses, 50c. for 1-2 pers., each pers. addit. 25c.; within Div. II, 75c. and 25c.; within Div. III, \$1, 25c. Per hour, with two horses, 1-4 pers. \$1.25 (\$1 for each addit.



hr.), with one horse, 1-3 pers., \$1 (75c. for each addit. hr.) Fares fifty per cent higher from midnight to 6 a.m. One trunk and small articles carried inside free, each extra trunk 5 c.

Tramways (electric) traverse the principal streets and reach various suburban points (fare 5c., liberal system of transfers), carrying at least 100,000 passengers daily. The *Belt Line*, running in both directions viâ King, Sherburne, Bloor, and Spadina Sts., affords a good general view of the city. It is better to take the car running to the E. on King St. — **Electric Railways** run from the termini of the tramways to *Mimic* and *Long Branch* (ev. $\frac{1}{2}$ hr.), *Weston*, *Lambton*, *Newmarket*, *Munro & Victoria Parks*, *Port Credit* (p. 209), etc.

Observation Coaches, calling at all the chief hotels, drive round the chief points of interest in and near the city twice daily (a. 9.30 a.m. & 2.30 p.m.; 3 hrs., fare \$1) — **Small Steamers** ply at frequent intervals to the *Island* (p. 197), the *Humber* (p. 198), *Long Branch* and *Lorne Park*, *Victoria Park* (p. 197), *Bowmanville*, etc. Larger boats ply to *Hamilton* (p. 209), to *Niagara-on-the-Lake* and *Lewiston* (comp. p. 209), to *Port Dalhousie* (p. 211) and *St Catharines* (p. 211), etc. The steamer for *Kingston*, the *St. Lawrence*, and *Montreal* (see E. 47) leaves Geddes Wharf (Pl. E, 4) every afternoon about 3.30 p.m.

Places of Amusement. [A large new theatre is planned] *Princess Theatre* (Pl. 1; D, 3), 167 King St. W., *Grand Opera House* (Pl. E, 3), *Majestic* (Pl. D, E, 3), *Adelaide St. W.*; *Shea's*, 93 Yonge St., *Massey Music Hall* (Pl. E, 2, 3), see p. 194. — **Good Concerts** are given by the *Mendelssohn Choir*, the *National Chorus*, the *Toronto Male Chorus Club*, and other societies — *Lacrosse Grounds*, at Rosedale (p. 197), *Baseball Grounds* (Pl. G, 3), *Fraser Ave.*, cor. of King St. E.; *Racecourse* at Woodbine Park, to the E. of the city; *Cricket Ground*, on University Lawn; *Golf Links* at Lambton (see above, open to guests of King Edward Hotel), East Toronto, Rosedale, and other adjacent points. — *Curling* is another favourite sport (numerous rinks) — *Rowing and Sailing* are carried on with great ardour in Toronto Bay and the Humber. Among the chief clubs are the *Royal Canadian Yacht Club*, the *Toronto, Don*, and *Argonaut Rowing Clubs*, and the *Canoe Club*. In winter *Ice Boating* is practised. — *Horse Show* at the Armouries (Pl. D, 2, 3; p. 195; usually about Easter). — *Bands* play in the public parks and gardens during summer.

Clubs. *National* (Pl. D, 3), 98 Bay St., *Toronto* (Pl. D, 3), 107 Wellington St. W.; *Albany* (Pl. 5; E, 3), 91 King St. E., *Deutscher Verein* (German), cor. of Church & Wood Sts., *Lieder-Kranz-Halle* (German), 257 Richmond St. W., with summer-premises on the Island (p. 197), *Toronto Hunt Club*, at Scarborough Heights (p. 190), Kingston Road, with charming grounds.

Art Exhibitions at the rooms of the *Ontario Society of Artists* (Pl. 7; D, 3), 165 King St. W., and at the *Normal School* (p. 194).

Newspapers. *Morning Globe* (Lib.; 1c.), *Mail & Empire* (Cons.; 1c.), *World* (Cons.; 1c.) *Evening Globe* (1c.), *Mail & Empire* (1c.), *News* (Ind.; 1c.), *Star* (Lib.; 1c.), *Telegram* (Lab.; 1c.)

Post Office (Pl. E, 3), Adelaide Street E. (open 7-7). Temporary office at cor. of Front St. and Lorne St., opposite the Queen's Hotel (comp. p. 194).

Consuls. United States, *Mr. R. S. Chalton Jr.*, 26 Adelaide St. W., German, *Mr. Samuel Nordheimer*, 15 King St. E.; French Consular Agent, *Mr. Auguste Bolle*, 47 Colborne St.

Toronto (250-350 ft. above sea-level), the 'Queen City', the capital of Ontario and the second city of Canada, lies on the N. shore of *Lake Ontario*, in a large and sheltered bay between the rivers *Don* and *Humber*. The bay is formed by a narrow sandy island (see p. 197), about 6 M. long, enclosing a fine harbour $3\frac{1}{2}$ sq. M. in extent, with a narrow entrance at the W. end and a cut on the S.E. side. The city extends along the lake-front for about 8 M., and its site slopes gradually upwards to an ancient lake-margin 3 M. inland. The streets

(some of them poorly paved) are laid out at right angles to each other, and the buildings are generally substantial and often handsome. *Yonge Street*, running to the N. from the water's edge and extending under the same name to *Lake Simcoe* (p. 198), 40 M. distant, divides the city into an E. and W. half. The chief business-streets are *Yonge St*, *King Street*, *Wellington Street*, and *Front Street*, the last three running parallel with the lake-front. The fashionable residence-streets are *St. George Street*, to the W., and *Jarvis Street* (pretty lawns and gardens) and *Sherbourne Street*, to the E. *Rosedale* (p. 197) is rapidly becoming a fine residential quarter, and *Bloor Street* contains some handsome dwellings. In 1901 Toronto contained 208,040 inhab., mainly Protestants of British stock. The population is now estimated at 260,000.

History. The name *Toronto* ('place of meeting') is first heard of as applied in the 17th cent. to the country of the Hurons, between Lake Simcoe and Lake Huron, but was afterwards naturally enough transferred to *Fort Rouillé*, a small French trading-post erected about 1749 at the starting-point of the river and portage route from Lake Ontario to the Toronto district (site marked by a pillar in the Exhibition Grounds, Pl. A, 4). The present city was founded by the United Empire Loyalists, under *Major-General Simcoe*, in 1793, under the name of *York*, and became the capital of the new province of Upper Canada the following year. The settlement grew at first but slowly, and contained only 900 inhab. at the outbreak of the war of 1812, in which it was twice sacked by the Americans. After this, however, its growth was more rapid and in 1834, when it received its city charter and changed its name to *Toronto*, the population of York was fully 10,000. *William Lyon Mackenzie*, leader of the unfortunate rebellion of 1837 (comp. p. 184), was one of the early mayors of Toronto. The later increase of Toronto has been phenomenal even among American cities. From 44,821 in 1861 the population rose to 86,415 in 1881, while in the next decade it was more than doubled. In April, 1904, the wholesale district of Toronto (Pl. D, E, 3) was visited by a destructive fire, which spread over 1½ acres and consumed property to the value of \$10,000,000. It is hoped to erect a new railway-station and other public buildings on the site thus cleared, between the present Union Station and the Custom House; and other contemplated city improvements include the construction of boulevards running diagonally to the N.E. and N.W. suburbs — Toronto is as predominantly British and Protestant as Quebec (p. 145) is French and Roman Catholic, each city forming an epitome of the province of which it is the capital. It is the centre of Ontario, commercially, religiously, and educationally as well as politically, and has substantial grounds for the claim it sometimes makes of being the 'Boston of Canada'. Toronto contains about one church for every 1000 inhab. and Sunday is very strictly observed. — Comp. 'Toronto of Old', by *Dr. Seadung*, and 'Landmarks of Toronto', by *J. R. Robertson*.

Trade and Industry. The position of Toronto as the outlet of the Canadian share of the Great North-West makes it of high commercial importance. The chief articles of export are timber, horses, wool, bacon, grain, clover and grass seeds, and various manufactured articles. The value of its imports in 1905 was \$53,194,085. Its manufactures include foundry-products, stoves, leather, flour, whiskey, and beer, and have a total annual value of about \$70,000,000. The agricultural machinery works of *Massey & Harris* and the distillery of *Gooderham & Worts* are widely known. The assessed value of taxable property in Toronto is about \$160,000,000.

Ontario, the province of which Toronto is the capital, is the richest and most populous in the Dominion, containing (1901) 2,182,987 inhab. or about 40 per cent of the total population of Canada. In size it ranks next to Quebec, with an extreme length of fully 1000 M., a breadth of

700 M., and an area of 222,000 sq M. It is bounded by Hudson Bay on the N., N.E. Territory and Quebec on the N.E. and E., the St. Lawrence and the Great Lakes on the S.E., S., and S.W., and Manitoba and Keewatin on the W. and N.W. Its surface and soil display a great variety of configuration and quality, but a large proportion of the province is suitable for agriculture, which forms the chief occupation of its people. The richest, most thickly peopled, and most highly cultivated part of the province is the so-called Peninsula of Ontario (p. 205). The chief crops are wheat, barley, oats, Indian corn, turnips, and potatoes, while fruit-growing, stock-raising, and dairy-farming are also successfully prosecuted. The huge and valuable forests make lumbering one of the chief industries. The minerals include gold (p. 243), silver, copper, iron, nickel (p. 233), cobalt (p. 239), gypsum, phosphates, marble, salt, natural gas, and petroleum. The long coast-line of the Great Lakes (ca. 1700 M.) affords excellent shipping facilities and has fostered an important trade. Many manufactures are also carried on, and the lake-fisheries are by no means inconsiderable. — Ontario was largely founded by the United Empire Loyalists after 1783 (comp. p. 192). It became a separate province, under the name of Upper Canada, in 1791; was re-united with Quebec in 1841; and once more became an independent province, with its present name, in 1867.

Taking the *Union Station* (Pl. D, 3) as the starting-point for our tour of the city, we may first follow *FRONT STREET* (Pl. C, D, 3), with its substantial warehouses and the *Queen's Hotel* (p. 190), to the E. to its junction with *YONGE STREET*, where stand the *Bank of Montreal* (Pl. E, 3) and the *Board of Trade* (Pl. 4; E, 3), both to the left. To the right rises the *Custom House* (Pl. E, 3), in an Italian style, and behind this, at the lake-end of Yonge St., is the *Customs Warehouse*.

Following Yonge St. to the left, we cross Wellington St., with the *Bank of British North America* (right), pass the *Office of the Globe* (Pl. E, 3), one of the chief organs of Canadian Liberalism (l.; at the corner of Melinda St.), and the ten-story building of the *Traders Bank of Canada* (r.; Pl. 6, E 3), said to be the highest business-edifice in the British Empire, and soon reach *KING STREET* (Pl. A-G, 3), the crossing of these two busy thoroughfares forming the practical centre of the city.

From Yonge St., a little to the N. of King St., the *Yonge St. Arcade* (Pl. E, 3) runs through to Victoria St. — In Temperance St., leading to the left from Yonge St., is the *Ontario Veterinary College* (Pl. 8, E, 3), largely attended by students from all parts of Canada and the United States.

In the section of King St. between Yonge St. and Bay St. (to the left or W. of Yonge St.) are the *Manning Arcade*, the handsome building of the *Canada Life Assurance Co* (Pl. 8; D, 3), the *Bank of Commerce* (at the corner of Jordan St.), and the *Bank of Nova Scotia* (No. 39), by Darling, with a beautifully proportioned hall. At the corner of King St. and Bay St. stands the *Office of the Toronto Mail & Empire* (Pl. D, 3).

We now follow King St. to the right (E.), passing, at the corner of Victoria St., the imposing *KING EDWARD HOTEL* (Pl. h, E 3; p. 190), with interesting frescoes by Mr. William Dodge in its hall. Farther on stands *St. James's Cathedral* (Pl. E, 3), a large Early English building, with some monuments and good stained-glass windows (Sun. services at 11 and 7; Wed., 8 p.m.). The spire, 316 ft. high, contains a chime of bells and an elaborate clock (view; adm. to tower 10 c.). A few yards beyond the cathedral is the *St. Lawrence Hall* or *Market* (Pl. E, 3), recently extended.

From St. James's Cathedral we follow **CHURCH STREET** (Pl. E, 1-3) to the N., crossing **Adelaide St. E.**, at the corner of which (right) is the excellent *Free Public Library* (Pl. E, 3), with 120,000 vols. and a good reference-department. Connected with it are four Branch Libraries. — At the corner to the left stands the *Post Office* (Pl. E, 3), burned down in 1906, but at once rebuilt.

In **Richmond St.**, between **Yonge St.** and **Church St.**, is the huge red *Confederation Life Association Building*.

In the square enclosed by **Church**, **Queen**, **Bond**, and **Shuter Sts.** stands the **Metropolitan Methodist Church** (Pl. E, 3), with its square tower and numerous pinnacles. It contains a great organ and an echo organ, having together 133 stops. On the N. side of the square are the new stone *Parsonage* of this church and the *Methodist Deaconesses' Home*. On the opposite side of **Shuter St.** is the **R. C. Cathedral of St. Michael** (Pl. E, 2), with its graceful spire, stained-glass windows, and interior polychrome decoration.

To the W., at the corner of **Shuter** and **Victoria Sts.**, is the large *Massey Music Hall* (Pl. E, 2, 3), for which Mr. H. A. Massey presented the city with \$100,000.

Farther out, **Church St.** passes the large ***Normal and Model Schools** (Pl. E, 2), which stand in pleasant grounds and include a library, an educational museum, a lecture-hall, an important archaeological collection (transferred from the Canadian Institute, p. 195), and a gallery of art, with copies of the old masters, sculptures, engravings, models of Egyptian and Assyrian antiquities, views illustrating Canadian history, etc. (open, free, 9-5; catalogue 25c). They are attended by about 800 students. In front is a bronze *Statue of Dr. Ryerson* (1808-82), the founder of the educational system of Ontario, by H. MacCarthy. The buildings also contain the offices of the *Provincial Department of Education*.

In the meantime we follow **QUEEN STREET** (Pl. A-G, 3) towards the W. To the right, facing the end of **Bay St.**, stands the ***City Hall and Court House** (Pl. D, E, 3), a large pile in a modern Romanesque ('Richardsonian') style, built by *Lennox* in 1891-99, with a lofty tower (300 ft high; view) and huge clock. The building cost \$5,000,000 and contains some interesting frescoes (by *G. A. Reid*) and portraits (W. L. Mackenzie, p. 192, etc.). The stained-glass window opposite the **Queen St.** entrance is 330sq. ft. in area and represents the union of commerce and industry.

A little to the S., at the corner of **Bay St.** and **Richmond St.**, is the imposing *Temple Building* (Pl. D, E, 3), finished in 1896 and containing the Canadian headquarters of the Independent Order of Foresters. *Oronhyatekha*, the Supreme Chief Ranger, is a Mohawk Indian. The Order numbers about 300,000 members and has courts in all parts of the British Empire and in various foreign countries.

Farther on in **Queen St.**, on the same side as the **City Hall**, between **Chestnut St.** and **College Ave.**, is ***Osgoode Hall** (Pl. D, 3), the seat of the Superior Courts of Ontario, a building in the Italian Renaissance style, erected at a cost of \$300,000 and named after the first Chief Justice of Upper Canada. It contains an extensive legal library (25,000 vols.) and some good portraits and is the seat of the *Law School*.

***UNIVERSITY AVENUE** (Pl. D, 2, 3), with its double row of elms and chestnuts, leads hence to ($\frac{2}{3}$ M.) ***Queen's Park** (Pl. D, 1), a

wooded tract 40 acres in extent, originally belonging to the Toronto University but now reserved as a public pleasure-ground. The large red buildings to the right, in University Avenue, are the *Armouries* (Pl. D, 2), erected by the Dominion Government for the Toronto militia. At the S. end of the park stand the massive buildings of the *Provincial Parliament* (Pl. D, 1), erected in 1888-92 at a cost of about \$1,300,000. They are in a 'neo-Grecian' style, from the design of *Wate* of Buffalo, and, but for the roofs, make a dignified and imposing appearance. The interior is admirably fitted up. Admission to the House of Assembly, comp. p. 153. Near the Parliament Building are a *Monument* (Pl. 35) to the memory of Canadian volunteers who fell in the Fenian raid of 1866; a *Statue of Queen Victoria* (Pl. 32), by Raggi, with panels by Alward and Banks; statues of the *Hon. George Brown* (Pl. 33, 1818-80; sculptor, Birch), a distinguished Canadian statesman and founder of the 'Toronto Globe' (p. 193), of *General Simcoe* (Pl. 31; p. 192), by Alward, of *Sir Oliver Mowat* (Pl. 34; by Alward), and of *Sir John Macdonald* (Pl. 29; p. 133), by Hamilton MacCarthy; and a *Monument* (Pl. 30, by Alward), commemorating the North West Rebellion of 1885. — To the W. of the park are the extensive buildings of the **University of Toronto* (Pl. D, 1), forming, perhaps, the finest ensemble of college architecture in the W. hemisphere. The main building, or *University College* (Pl. 14), in the Norman style, with a massive central tower, was finished in 1859, at a cost of \$500,000 (architects, *Cumberland & Storm*), but was unfortunately burned down in 1890. Since then, however, it has been rebuilt in substantially the same form as before (architect, *Dick*). Within the University Grounds are the new *Convocation Hall* (Pl. 19; an imposing circular building with a fine façade), the new *Medical Building* (Pl. 16), the *Engineering Building* (Pl. 21), the new *Museum* (Pl. 24, good Egyptian, Cretan, and Palestine collections), the *School of Practical Science* (Pl. 12), the *Library* (Pl. 15; portraits of Goldwin Smith, Sir Daniel Wilson, Edward Blake, etc.), the *Chemistry Building* (Pl. 22), the *Biological Building* (Pl. 17), and a well-equipped *Gymnasium* (Pl. 13). — Facing the University Grounds is the *Canadian Institute* (Pl. 23; D, 2), with a valuable scientific library (8000 vols.) and reading-room.

The *Main Entrance* to University College, with a handsome portico, is in the tower, on the S. The E. and W. wings are entered from a spacious vestibule, with fine stone pillars and carving. On the second floor are two lofty and well-proportioned *Halls*, with noteworthy wood-carving. The *Senate Chamber*, in the E. wing, is approached by a staircase with a dragon carved in wood. The W. wing contains *Laboratories*, etc. The **View from the Tower* (key kept by janitor; gratuity) includes the whole city and its environs. — A fine *Campus* (Pl. D, 1) has been laid out to the N. of the main building.

The University of Toronto, together with University College, now attended by 2200 students, offers a complete course of training in arts, medicine, and engineering. Affiliated with it, but not forming part of the State institution, are the Presbyterian *Knox College* (Pl. C, 1), in Spadina

Ave. (probably to be removed to Queen's Park); the Episcopalian *Wycliffe College* (Pl. 11; D, 1), behind the University, the Roman Catholic *St Michael's College* (Pl. D, 1), in St. Joseph St.; the *Royal College of Dental Surgeons* (Pl. 28; D, 2), College St.; the *Ontario College of Pharmacy*, Gerrard St., the *Conservatory of Music* (Pl. 27, D 2, 1400 pupils), College St., cor. of University Ave; the *Toronto College of Music*, Pembroke St., and *Huron Episcopalian College*, London (Ont.)

Victoria University (Pl. 14; D, 1), in the N. part of Queen's Park, is an important Methodist institution, federated with the University of Toronto (400 students). — **McMaster University** (Pl. 10; D, 1), a brick and stone building to the N of the park, facing Bloor St., is an independent Baptist institution, with faculties of arts and theology (200 students). Near McMaster University is the *Dommon Governmental Observatory* (Pl. 9; D, 1), recently removed to this site from the University grounds

Queen's Hall (Pl. 25; D, 2) and *Annesley Hall* (Pl. D, 1) are dormitories for girl-students

At the N.W. corner of St George St. and College St. stands the new **Carnegie Library** (Pl. C, 2), for which *Mr Andrew Carnegie* has given \$ 350,000.

Making a fresh start from the Union Station (Pl. D, 3) and ascending **SIMCOB STREET** (Pl. D, 2, 3), we see to the left, beyond Wellington St., *Government House* (Pl. D, 3), the residence of the Lieutenant-Governor, situated in pleasant *Grounds (admission on written application to the A. D. C. in waiting). To the right, at the corner of King St, is the Presbyterian **Church of St. Andrew* (Pl. D, 3), in a modified Norman style.

On reaching **QUEEN STREET WEST** (Pl. C, 3), we may turn to the left and in a few minutes come to *John Street*, which leads to the right to *The Grange* (Pl. D, 2), an interesting old Colonial mansion occupied by *Professor Goldwin Smith*. The Grange was closely associated with the famous 'Family Compact' (p. xxiv) — About 1 $\frac{1}{4}$ M. farther along Queen St., to the right, is **Trinity College** (Pl. B, 3), an Anglican university founded by Bishop Strachan in 1851, when University College was secularized, with faculties of arts, law, and theology (150 students). The building is in the late-Gothic style and stands in pleasant grounds. Trinity College was federated with the University of Toronto in 1903. — A little farther on, to the left, is the huge **Provincial Lunatic Asylum** (Pl. A, 3), with 40 acres of ground and accommodation for 700 patients.

Queen St. ends, 1 $\frac{1}{2}$ M. farther on, at **High Park**, a well-wooded tract of 350 acres, much frequented by holiday-makers. The mausoleum of the donor, *Mr. J. G. Howard* (d. 1890), is enclosed by part of the old railing that surrounded St Paul's Cathedral, London. The park is bounded on the W. by the *Humber River* (p. 191), from the mouth of which a ferry-steamer plies to *Yonge St. Wharf* (Pl. E, 4).

At no great distance from the Lunatic Asylum are the *Mercer Reformatory* (Pl. A, 3), the *Central Prison* (Pl. A, 3), and the *Exhibition Grounds* (Pl. A, 4). The last are the scene of an important *National Exhibition* or 'Fair', sometimes attended by 500,000 visitors. Various substantial buildings have been erected for this exhibition, and the grounds have recently been extended by the inclusion of part of the adjacent Government property. By the water's edge, to the S.E. of the Exhibition Park, is the *New Fort* (Pl. A, 4), connected by a road with the *Old Fort* (Pl. B, 4), nearer the centre of the town. In the capture of the latter in 1813 the American leader, *Gen. Pike*, was killed.

The **Horticultural** or **Allan Gardens** (Pl. E, 2; open till dark) lie to the N.E. of the Normal School (p. 194). To the W. is the *Toronto Collegiate Institute* (Pl. E, 2), the oldest secondary school in Ontario

[There are two other schools of similar rank in the city, one in Harbord St. and one in Jameson Ave. Other important schools are the *Technical High School* (Pl. 26, D, 2), *St. Andrew's College*, at Rosedale, *St. Margaret's* in Spadina Ave; and *Havergal Hall*, in Jarvis St (the last two for girls)]

Among the other places of greater or less interest in Toronto may be mentioned the imposing buildings of the **Upper Canada College** (beyond Pl. D, 1), a high-class school for boys, with about 300 pupils (*View from the tower), the *General Hospital* (Pl. F, 2); the *Home for Incurables* (beyond Pl. A, 3; good view from tower); the *St. Alban's Cathedral* (beyond Pl. C, 1; chancel only completed); *Bond Street Congregational Church*, *Jarvis Street Baptist Church*; and the *Church of Our Lady of Lourdes*, at the corner of Sherbourne and Earl Sts. (Pl. E, 1)

The **Island** (Pl. C-F, 5, 6), which shelters the harbour (see p. 191), is the *Margate* or *Coney Island* of Toronto and is frequented in summer by large crowds (ferries from Church St, Yonge St, York St, and Brock St., plying to *Hanlan's Point*, at the W. end, and to *Island Park*, in the centre; return fare 10 c). Like Coney Island, it is nothing but a large sand-bank, fringed with flimsy summer-cottages and studded with merry-go-rounds, band-stands, dancing-pavilions, and the other paraphernalia of a Cockney Paradise. At the S.W. corner are a *Lighthouse* and a *Children's Summer Hospital* (Pl. C, 7), and at the E. end are some attractive cottages. In the middle is one of the club-houses of the *Royal Canadian Yacht Club*. The hotel at Hanlan's Point was once owned by *Edward Hanlan*, at one time champion sculler of the world. At night the electric lights of the Island produce a very picturesque effect as seen from Toronto.

Perhaps the pleasantest short drive from Toronto is that across the bridge over the *Ravine of the Don* (*Riverdale Park*; Pl. G, 1, 2), on the N.E. side of the town, to the pretty suburb of *Rosedale* (Pl. F, G, 1), where a lacrosse match is generally going on on Sat in summer (comp p. 191). In the vicinity are three picturesque *Cemeteries* — Excursions may also be made by steamer or electric railway to *Lorne Park* (Hotel Louise, \$1½) and *Long Branch* (Long Branch Hotel, \$1½-2), lying beyond the Humber (p. 191), and to *Victoria Park*, *Munro Park*, and *Scarboro Heights* to the E (comp p. 190), *Reservoir Park* (to the N.), and *Grimsbey Park* (Lake View Ho., \$1½-2)

From Toronto to *Hamilton*, *Niagara*, and *Buffalo*, see R. 43, to *Montreal*, see RR. 38, 47; to *Detroit*, see R. 42, to the *Muskoka Lakes*, see R. 40

40. From Toronto to North Bay. Muskoka District.

227 M. **GRAND TRUNK RAILWAY** in 8-13 hrs. (fare \$6 85; sleeper \$2). This line affords the main access to the beautiful *Muskoka Lake District* (see p. 201). Through-carriages run to *Muskoka Wharf* (p. 200, fare \$3 40, sleeper \$1 50, pailor-car 50 c); and return-tickets are issued at reduced rates to all the principal points on the lakes (to *Beaumaris* and back \$5.75, all round the Muskoka Lakes \$7.55, etc.). Similar tickets are issued at Hamilton, London, Niagara, Port Huron, and Detroit.

Toronto, see R. 39. The line runs towards the W. (view of the *Lunatic Asylum* to the right and *Home for Incurables* to the left),

then turns to the N. and quits the city precincts at ($4\frac{1}{2}$ M.) *Davenport*. To the left is the valley of the *Humber* (p. 191). About 3 M. beyond (23 M.) *King* we cross the watershed between Lakes Ontario and Huron (1000 ft. above sea-level). The *Vale of Aurora*, through which we now pass, recalls an English landscape. 30 M. *Aurora* (1590 inhab.); $34\frac{1}{2}$ M. *Newmarket* (Forsyth Hotel, $\$1\frac{1}{4}$ - $1\frac{1}{2}$), with (1901) 2125 inhab. and some manufactories. To the right, a little farther on, are the headwaters of the *Holland River*, part of the old canoe and portage route from Toronto to Lake Simcoe (comp. p. 192). — 38 M. *Holland Landing*, a place of some importance in the pre-railway days. On the village-green (not visible from the train) is a large anchor, brought from England and destined for service on the Great Lakes, but stranded here owing to the declaration of peace between Great Britain and the United States (1815). — We cross the Holland River at (41 M.) *Bradford* (Hulse Ho., Queen's, \$1), frequented by sportsmen and anglers (maskinonge, etc.). — At (52 M.) *Lefroy* (Lefroy Hotel, \$1) we have our first view (right) of *Lake Simcoe* (see below). *Roach's Point*, seen across the narrow S. arm of the lake (ferry), is a favourite summer and fishing resort.

63 M. *Allandale* (*Rail. Restaurant*), situated at the end of *Kempfenfeldt Bay*, the narrow W. arm of Lake Simcoe, is the junction of lines to (95 M.) *Hamilton* (p. 209), *Penetang* (30 M.), and (52 M.) *Meaford*. The monument in the station-garden commemorates *Col. Cumberland*, long General Manager of the N. & N.W. Railway.

The line to Meaford (Paul's Hotel, $\$1\frac{1}{2}$ -2; 1916 inhab.), on *Nottawasaga Bay*, the S. compartment of *Georgian Bay* (p. 228), passes ($32\frac{1}{2}$ M.) *Collingwood* (*Grand Central*, $\$2$ - $2\frac{1}{2}$; *Globe*, $\$1\frac{1}{2}$ -2; U. S. Consul, *Mr. R. B. Mosher*), another flourishing lake-port, with (1901) 5755 inhab., whence steamers ply to points of importance on Georgian Bay, Lake Huron, and Lake Superior (comp. p. 228; fares as from Owen Sound, p. 222).

Penetang or *Penetanguishene* (880 ft.; **The Penetanguishene*, from \$2; *Northern*, $\$1$ - $1\frac{1}{2}$), with (1901) 2422 inhab., lies at the head of an inlet of Georgian Bay, $2\frac{1}{2}$ M. from Midland (p. 199). It was formerly the Canadian naval station on the Great Lakes but was dismantled on the convention of mutual disarmament with the United States. It is now frequented as a summer-resort and by sportsmen (Indian guides \$2 per day). The Jesuit establishment here dates from 1684. Steamers ply hence to *Sans Souci* (Sans Souci Hotel, $\$2$ - $2\frac{1}{2}$), *Parry Sound* (p. 204), and other places in the *Parry Archipelago*, etc.

64 M. *Barrie* (Queen's, $\$1\frac{1}{2}$ -2; *Barrie Ho.*, $\$1\frac{1}{2}$; U. S. Agent), a flourishing little city and summer-resort, with (1901) 4894 inhab., is prettily situated on the N. side of *Kempfenfeldt Bay*. It is the starting-point of the Lake Simcoe steamer (see below).

**Lake Simcoe* (710 ft.) is a beautiful sheet of water, about 30 M. long and 26 M. wide (if we measure up to the heads of the long narrow bays on the S. and W.). It affords good boating and fishing and has several pleasant summer-resorts and private residences on its banks. In this neighbourhood took place the chief events of the great war between the Hurons and Iroquois, in which the former barely escaped extermination. A few Hurons still inhabit *Serpent Island*, near the S. end of the lake. The Mississaugas later on drove the Iroquois out of the district (see p. 199).

The steamer from Barrie calls at (9 M.) *Big Bay Point* (Peninsular Park Hotel, a favourite summer-resort, \$2), at the junction of *Kempen-*

feldt Bay with the main body of the lake, and then proceeds to the N., passing through the *Narrows*, to *Orillia* (see below) — Among the chief resorts on the lake are *Sutton West* and *Jackson's Point*, on the S shore, reached by direct railway from Toronto (35 M.; comp. p. 190) — Another is *Morton Park*, reached by ferry from Lefroy (p. 198) — *Strawberry Island* is reached by steamer from (7 M.) *Orillia* (see below)

Beyond Barrie the railway skirts the W. shore of Lake Simcoe (views to the right) and reaches (86 M.) *Orillia* (800 ft.; *Orillia Ho.*, \$1½-2, *Daly Ho.*, *Victoria*, \$1-1½; numerous boarding-houses; U. S. Consul, *Mr. E. A. Wakefield*), a pleasant little town and summer-resort, with (1901) 4907 inhab., situated at the head of *Lake Couchiching* (see below). It contains a small *Town Park*, in the grounds of the old *Lunatic Asylum*, while 2 M. off, on a point stretching out into the lake, is the attractive *Couchiching Beach Park*. There is a fair golf-course, while the lake affords excellent boating.

**Lake Couchiching* ('Lake of Many Winds'), about 14 M. long and 2-3 M. wide, is connected with Lake Simcoe by a narrow strait, crossed by the railway (see below). Steamers ply regularly from *Orillia* to *Washago* (see below). The lake affords good fishing for bass, salmon-trout, maskinonge, and pickerel.

From *Orillia* a branch-line runs to the N.W. to (32 M.) *Midland* (Gladstone Ho., *Queen's*, *Hewitt's* Ho., \$1½-2; U. S. Agent), a good fishing-resort (boat 50 c. per day, guide \$2), near *Penetang*, on *Georgian Bay* (steamers). It has a good harbour, dominated by two huge elevators. A steam-yacht runs from *Midland* to (15 M.) the *Victoria House* at *Honey Harbour*. — In the other direction this line runs to *Beaverton*, *Lindsay*, and *Peterborough* (comp. p. 188).

As we leave *Orillia*, we see the large *District Lunatic Asylum* to the right. The train crosses a swing-bridge over the 'Narrows' connecting *Lakes Simcoe* and *Couchiching*, passes (88½ M.) *Atherley Junction*, and runs along the E. side of *Lake Couchiching*. Near *Atherley* are *Orchard Point Summer Resort* (\$1½-2) and the *Royal Narrows Hotel* (\$1½-2). — 92 M. *Rama* is the reservation of the last of the *Ojibwa Indians*, the remnant of the tens of thousands that once occupied this district. To the E. of (94 M.) *Longford* lies *Lake St. John*. — 99 M. *Washago* (Northern Ho., \$1; steamer, see above) lies at the foot of *Lake Couchiching*. The *Severn*, which here issues from the lake and drains into *Georgian Bay*, is famous for its fishing and for the game on its banks. From (100 M.) *Severn* the canoeist can reach *Gravenhurst* (see below) via the *Severn*, *Sparrow Lake* (*Stanton Ho.*, \$1-2), etc. (canoes and guides, obtained at *Rama* or *Orillia*, \$2 a day). — Beyond this point the limestone formations through which we have been passing give place to red granite. Beyond (106 M.) *Kilworth* we pass through the *Granite Notch* and reach the *Muskoka District* (see p. 201).

111 M. *Gravenhurst* (*Minnewaska*, \$2; *Fern Glen*, \$2; many boarding-houses), a village with (1901) 2146 inhab., prettily situated at the foot of *Muskoka Lake*, is the chief gateway to the beautiful district described at pp. 201-203. All needful camp-supplies can be obtained here. *Gravenhurst* has two Sanatoria for consumptive patients (comp. p. 201). — A short branch-line runs to the left to

(1 M.) *Muskoka Wharf* (comp. pp. 197, 201). — Beyond Gravenhurst the North Bay line diverges somewhat from Muskoka Lake, of which the railway affords no other view. — 121½ M. *Bracebridge* (*Queen's, British Lion, Albion, Dominion*, \$ 1-1½), where we cross the *Muskoka River*, is another gateway to the Muskoka Region, the steamers ascending the river to this point (comp. p. 203).

The fine **South Falls* of the Muskoka, about 3 M. from Bracebridge, descend 130 ft. in two leaps. — The *High Falls*, 4 M. distant, are also worth visiting. — The *North Branch Falls*, near the town, have been spoiled by lumber-mills

Farther on, the river flows to our right. Good roads lead from (135 M.) *Utterson* (Commercial, \$ 1) to (ca. 5 M.) *Skeleton Lake* (Newport Ho., \$ 1-1½) and *Three Mile Lake* (p. 202). *Mary Lake* (Grunwald, on the W. bank, \$ 1-2, Clyffe Ho., McInnes Ho., at Port Sydney, \$ 1) lies 2½ M. to the E. — Passing the tiny *Round Lake* (l.), we reach (146 M.) *Huntsville* (*Kent Ho.*, \$ 1½; *Vernon Ho.*, *Dominion Ho.*, \$ 1), situated between *Lake Vernon* (l.) and *Fairy Lake* (r.), two of the chain of lakes on the Muskoka River.

Small steamers ply twice daily in summer through the *Huntsville Lakes* and the adjacent **Lake of Bays*, all of which abound in speckled trout and are becoming more and more frequented by sportsmen and summer visitors. Among the chief resorts are *Fairy Lake Hotel* (\$ 1½-2); *Deerhurst Hotel* (\$ 1½-2) and *La Portage Hotel* (\$ 1½-2), on *Peninsular Lake*, *Dwight* (Ronville, \$ 2; *Goldie Ho.*, \$ 1); *Fox Point* (Cunnington, \$ 1-1½); *Port Julian*; *Baysville* (Manitoba, Richards, etc., \$ 1); and *Dorset* (Fairview, *Dorset Ho.*, \$ 1-1½), the terminus of the steamer-route, 18 M. from Huntsville. To the E. of Dorset (stage) are *Hollow Lake* and *Kemba's Lake*, also frequented by sportsmen. Canoeists can make pleasant trips on all these lakes, the island scenery of which vies with that of many more famous resorts.

Before reaching (154½ M.) *Novar* we cross the N. branch of the Muskoka. At (161 M.) *Scotia Junction* we intersect the Grand Trunk Railway from Ottawa to Parry Sound (see p. 204). In approaching (166½ M.) *Katrine*, another pleasant centre, we cross the *S. Maganetawan River*. — 171 M. *Burk's Falls* (*Burk Ho.*, \$ 2; *Clifton Ho.*, \$ 1-1½), a large village on the N. bank of the *Maganetawan*, a little way below the junction of its N. and S. branches, is the starting-point of the interesting trip down the *Maganetawan*, which sportsmen will find especially remunerative.

Two steamers descend the *Maganetawan* daily to (15 M.) *Maganetawan* (Klondike, \$ 1), on *Lake Cecebe* (1050 ft.; pron. 'Seseeb'; *Cecebe Ho.*, \$ 1), and to *Port Huron* (hotel) and (40 M.) *Ahmie Harbour* (Chilbourne Ho., \$ 1), on *Lake Ahmie* (Forest Nock, \$ 1½-2; return-ticket from Toronto to this point \$ 8 60). The canoeist may go on (with guide; numerous portages) all the way to *Port Byng*, 55 M. farther on, on Georgian Bay, or he may explore the various affluents and ramifications of the *Maganetawan*. The scenery is picturesque, and the opportunities for fishing and shooting (deer, etc.) are excellent. The canoeist should, of course, be prepared to camp out at night, though he may occasionally find quarters in a farmhouse. From Byng Inlet steamers ply to *Parry Sound*, *Penetang* (p. 188), etc.

Our line continues to run towards the N. 183 M. *Sundridge* (1115 ft.; Grand Central, \$ 1), on *Stony Lake* (r.). Beyond (188 M.) *South River* (1180 ft.; Mecunoma, *Queen's*, \$ 1), the highest point

on the railway, we cross that stream, which, in spite of its name, flows toward the N. to Lake Nipissing. 199 $\frac{1}{2}$ M. *Trout Creek*, 13 M. from the N.W. corner of *Algonquin Park* (p. 204); 207 M. *Powassan*; 219 M. *Callander* (White Ho., Pacific Hotel, \$1-1 $\frac{1}{2}$), on the S.E. bay of *Lake Nipissing* (p. 233), with good fishing and duck-shooting. At (223 M.) *Nipissing Junction* we join the C.P.R. (R. 48).

227 M. *North Bay*, see p. 233.

The so-called ***Muskoka Lake Region**, in the highlands of Ontario, occupies, in its widest sense, an area of about 10,000 sq. M., between Georgian Bay (*Lake Huron*) on the W., *Lake Nipissing* on the N., and *Lake Simcoe* on the S., with a somewhat indefinite boundary-line on the E. Within this district, which has a mean altitude above the sea of about 800 ft. (200 ft. above *Lake Huron*), there are, perhaps, 800-1000 lakes and ponds, connected by innumerable streams. The Muskoka District proper includes the three connected lakes described below: *Muskoka*, *Rosseau*, and *Joseph*.

The scenery of Lakes Muskoka, Rosseau, and Joseph is full of variety and charm, and the air is pure and bracing. Immunity from hay-fever is alleged to be unfailing. About 400 islets are scattered throughout the three lakes. Excellent fishing for bass, pickerel, maskinonge, and salmon-trout is enjoyed in the lakes themselves or in adjacent waters, while the forests on their banks contain deer, grouse, and many other kinds of game (game-laws, see p. lxi). The facilities for boating, canoeing, and bathing are ample. Numerous small hotels and boarding-houses afford fair accommodation at moderate prices (see p. 202), and there is now at least one first-class modern hotel. The hotels are often crowded in summer, so that it is advisable to secure rooms in advance. The services of a good guide for fishing or sporting expeditions cost about \$2 a day; a man or boy to row may be obtained for \$1-1 $\frac{1}{2}$. Steamers ply regularly in summer from *Muskoka Wharf* (p. 200) to the ends of Lakes Rosseau and Joseph, calling at intermediate points; another runs from *Bracebridge* to *Bala* (p. 203). Only the regular landings are mentioned at pp. 202, 203.

I. FROM MUSKOKA WHARF TO ROSSEAU, at the head of Lake Rosseau, 33 M., *Steamer* in 4 $\frac{3}{4}$ hrs. (fare \$1; D. 40c.). — *Muskoka Wharf* (p. 200) lies at the end of the narrow S. bay of ***Muskoka Lake** (800 ft.), the southernmost and largest (20 M. long, 2-8 M. wide) of the three lakes. The steamer starts at present at about 2 p.m., on the arrival of the express from Toronto (comp. p. 197). To the right, before we leave the bay, is a large *Sanatorium for Consumptives*. On entering the lake proper the steamer steers along its E. side, passing between two large islands and the mouth of the *Muskoka River* (p. 200). Numerous summer cottages and camps sprinkle both mainland and islands.

13 M. (r.) **Beaumaris** (*Hotel*, \$2 $\frac{1}{2}$ -3 $\frac{1}{2}$), on *Tondern Island*, separated from the mainland by a narrow channel. Opposite, on the mainland, at *Milford Bay*, is *Milford Bay House* (\$1 $\frac{1}{2}$ -2). The steamer now steers into *Indian River*, connecting Lake Muskoka with Lake Rosseau. On the left lies (21 M.) *Port Carling* (*Stratton Ho.*, *Port Carling Ho.*, \$1 $\frac{1}{2}$ -2), the most central village on the

three lakes and called at by all the steamers. It has three churches and stores where all kinds of supplies may be obtained. We now pass through the locks connecting the two lakes and enter ***Lake Rosseau** (805 ft.), which is 12 M. long and 1-6 M. wide. Like its companions, it is dotted with innumerable islands. Our first call is at (24 M.) *Windermere* (Windermere Ho., \$2; Waskada, \$1½-2½; Fife Ho., \$1½), on the E. bank, with two churches, a mechanic institute, a library, and a group of cottages erected by the *Windermere Club*. A little farther on we pass the mouth of the *Dee* (r.), which canoeists may ascend to (2 M.) *Three Mile Lake* (p. 200). To the right, beyond this, lies *Rosstrevor* (\$1). On an island to the left is the new ***Royal Muskoka Hotel** (from \$3 up), a large house with modern equipment and room for 300 guests. There is a golf-course in connection with the hotel. We then thread the narrow strait between *Tobin Island* and the mainland and pass *Juddhaven* (l.; Ernescliff, \$1½-2½; The Bluff, \$1). Opposite (r.) opens *Skeleton Bay*, into the head of which flows the *Skeleton River*, the outlet of (4 M.) *Skeleton Lake* (p. 200; Newport Ho., \$1-1½). Just before reaching Rosseau the steamer stops at the *Maplehurst Hotel* (\$2), on the left bank. — 33 M. **Rosseau** (*Monteith Ho.*, commercial, \$2; *Rossmoyne*, \$1½-2), a small village, much resorted to by summer-visitors and anglers. A charming excursion may be made up the ***Shadow River**, which enters the bay here and is so called from its magical reflections (best in autumn). The *Bridal Veil Falls*, on an affluent of the Shadow River, are picturesque. Coaches run from Rosseau to (7 M.) *Port Cockburn* (p. 203) and (12 M.) *Maple Lake Station* (p. 204).

II. FROM MUSKOKA WHARF TO PORT COCKBURN, at the head of Lake Joseph, 48 M., *Steamer* in 5¼ hrs (fare \$1.25, D. 40 c.). As far as (21 M.) *Port Carling* this route coincides with that above described. On leaving the Indian River, the Lake Joseph steamer turns to the left and steers through *Venetia*, the island-dotted S. part of Lake Rosseau. 23 M. *Ferndale House* (\$1½), on an inlet to the left. We then cross to *Woodington* (Woodington Ho., \$1½) and (26 M.) *Cleveland's* (Cleveland's, Paignton Ho., \$1-1½), on the opposite shore, whence we turn to the S. again to (28 M.) *Gregory*, at the mouth of the *Joseph River*, one of the channels leading to Lake Joseph. The steamer, however, crosses to (30 M.) *Port Sandfield* (*Prospect Ho.*, \$2), on a short canal made to improve the navigation between Lake Muskoka and ***Lake Joseph** (800 ft.), 14 M. long and ½-3½ M. wide. The first stops made here are (33 M.) *Redwood* and (36 M.) *Hamil's Point* (Hamil's Hotel, \$1½), the latter dividing the main lake from *Foot's Bay* and *Bass Lake*. The steamer then steers up the middle of the lake to (39 M.) the island of *Yoho*, beyond which it calls at the (43 M.) *Stanley House* (\$2), on the E. bank. [To the N.E. of Yoho lies *Portage Lake*, connected with Lake Joseph and leading

by easy portage to *Crane Lake*] — 48 M. **Port Cockburn** (*Summit Ho.*, \$2), at the head of Lake Joseph, is an excellent centre for anglers, being within easy reach of innumerable small lakes and streams. A stage-coach runs hence daily in summer to (8 M.) *Maple Lake Station* (p. 204), on the Grand Trunk Railway (for Parry Sound). A stage also runs hence to (7 M.) *Rosseau* (p. 202).

Another charming point on Lake Joseph, called at occasionally by the regular steamers, is *Crangie Lea* (hotel, \$1½-2), on the E bank, at the entrance to the pretty *Little Lake Joseph*.

III. FROM BRACEBRIDGE TO BALA, 21 M., *Steamer* twice daily in 2 hrs. (fare 60 c.) From *Bracebridge* (see p. 200) the steamer descends the *Muskoka River*, passing *Alport* (r), to (6 M.) *Muskoka Lake*. Here it turns to the N. and calls at (12 M.) *Beaumaris* (p. 201), where it connects with the Lake Joseph and Lake Rosseau boats. We then cross the lake towards the W, calling at (16 M.) *Mortimer's Point*. — 21 M. **Bala** (*Windsor Ho.*, \$1½-2; *Musquash Lodge*, \$1-1½), the terminus of this route, lies on the E. bank of Lake Muskoka, at the outflow of the *Musquash* or *Muskosh River*, which carries the waters of the Muskoka lakes to Georgian Bay. Just after leaving the lake the river forms a fall 20-25 ft. high, below which it divides into two branches, that to the right taking the name of *Moon River*. Good fishing is obtained in both branches and in many small lakes near Bala.

41. From Ottawa to Depot Harbour (*Parry Sound*).

264 M. GRAND TRUNK RAILWAY (*Ottawa Division*) in 9-10 hrs. (fare \$8 80; sleeper \$2). This railway forms a direct line of communication between Ottawa and Lake Huron (Georgian Bay) and is also the shortest route from Ottawa and Montreal to the Muskoka District (p. 201). It runs through the Algonquin National Park (p. 204).

Ottawa, see p. 176. The train starts at the *Central Station* and at first runs towards the S. It then crosses the *Rideau Canal* (see p. 183) and the C. P. R. (p. 230) and runs towards the E. — 14 M. *South March*; 20 M. *Carp* (the village some distance to the S., on the river of the same name). We cross the *Carp* near (29 M.) *Kinburn*. 33 M. *Galetta*, on *Indian River*.

38 M. **Arnprior** (*Charleston, Devon Ho.*, \$1½, U. S. Agent), a small and thriving town, with (1901) 4152 inhab. and productive marble-quarries, lies on the S. bank of the Ottawa, near the expansion of the river known as the *Lac des Chats*. Good bass-fishing is enjoyed here. Below the lake the river forms the fine **Falls* or *Rapids of the Chats*. — Arnprior is also a station on the C. P. R. (see p. 231).

The railway now skirts the S. bank of the Ottawa for a short distance and then diverges to the left. 46 M. *Glasgow*; 50 M. *Goshen*. — At (55 M.) *Renfrew* (p. 231) we intersect the C. P. R. (R. 48). We now ascend along the right bank of the *Bonnechere River*. 61 M.

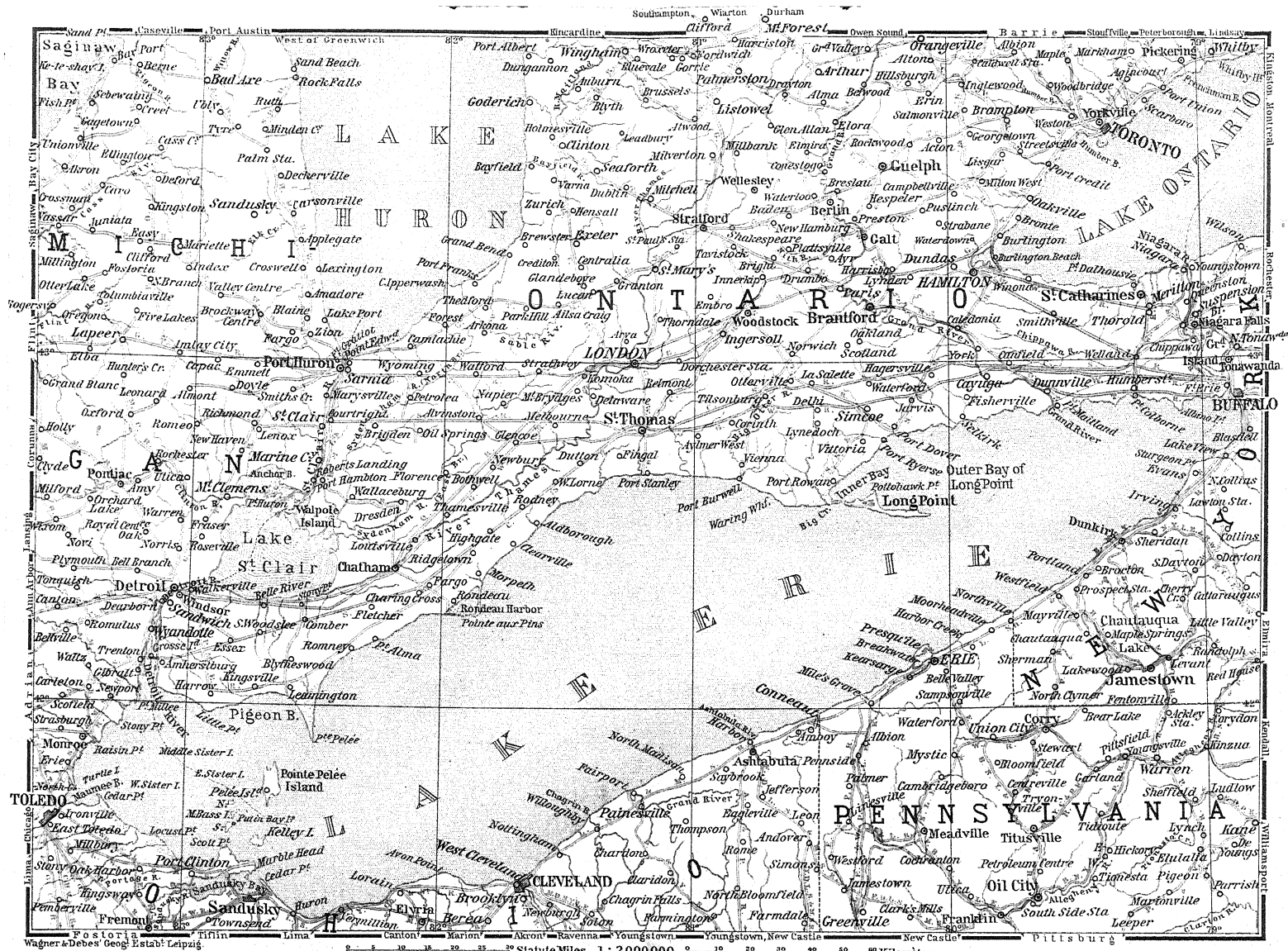
Admaston; 67 M. *Douglas*; 70 M. *Caldwell*; 77 M. *Eganville*. Graphite of good quality has been found in this vicinity. — 85 M. *Golden Lake Station*, at the E. end of the lake, is the junction of a line running to the N. to *Pembroke* (p. 231). — 94 M. *Killaloe*; 102 M. *Wilno*; 109 M. *Barry's Bay*. To the left lies *Bark Lake*, to the right (at some distance) is *Little Opeongo Lake*. — At (130 M.) *Madawaska* (Rail. Restaurant) we enter the valley of that stream, which runs to our left. — 145 M. *Whitney*. — Beyond (156 M.) *Rock Lake* the railway enters the **Algonquin National Park** (see below), across the S.W. corner of which it runs (comp. Map at p. 186).

Algonquin Park, a picturesque tract of rock, forest, and water, was set apart by the Government of Ontario in 1893 for the preservation of game and forests and as a public pleasure and health resort. It lies on the watershed between the Ottawa and Georgian Bay and comprises an area of 2000 sq M (ca. 45 M square). Its fine timber includes white and red pine, black birch, maple, hemlock, ironwood, beech, black ash, basswood, cedar, spruce, tamarack, and alder, while animated nature is represented by the moose (rare), deer, beaver, bear, wolf, mink, otter, martin, musk-rat, partridge, duck, trout, bass, whitefish, pike, chub, etc. It contains the fountain-heads of the rivers Muskoka, Madawaska, Petawawa, Bonnechere, and Amable du Fond, and also innumerable lakes, among the largest of which are the *Great Opeongo*, *Trout Lake*, *Misty Lake*, *Smoke Lake*, *Island Lake*, and *Mamou Lake*. Many rough roads (for portages) have been recently made, and shelter-huts have been built at convenient points (comp. Map issued by the Ontario Government). Licenses to fish (\$2) or make a tour through the park may be obtained on application to the Superintendent, *Mr. G. W. Barillet* (Algonquin Park, Ont.) The charge for guides is \$2½ per day, with canoe.

The railway-stations within Algonquin Park are (168 M) *Algonquin Park*, (170 M.) *Canoe Lake*, (182 M.) *Brûlé Lake*, and (190 M.) *Rainy Lake* (1630 ft). — 200 M. *Ravensworth* (inn). 207 M. *Kearney* (Kearney Ho., Ottawa Ho., \$1) has good trout-fishing and is said to afford excellent deer and partridge shooting owing to the overflow from the protected area of Algonquin Park. — At (213 M.) *Scotia Junction* (p. 200) we intersect the Grand Trunk Railway from Toronto to North Bay (R. 40). The line now bends towards the S.W. — 224 M. *Sprucedale* (inn); 236 M. *Seguin Falls*; 242 M. *Edgington*. — 245 M. *Maple Lake* (Maple Lake Ho., \$1½-2) forms the N. gateway to the *Muskoka District* (R. 40), stage-coaches running hence to (8 M.) *Port Cockburn* (p. 203) and (12 M.) *Rosseau* (p. 202).

From (257 M.) *James Bay Junction* a short branch-line runs to (3 M.) *Parry Sound* (*Belvidere*, \$2-2½; *Mansion Ho.*, \$1½-2; *U. S. Agent*), a small town with (1901) 2884 inhab., situated on the shore of *Parry Sound*, at the mouth of the *Seguin River*, opposite *Parry Island*. It is called at by the steamers of the Northern Nav. Co., which put it in communication with Collingwood, Midland, Penetang, and other points on Georgian Bay (comp. pp. 198, 223). Sailing and steam yachts may be hired here for excursions.

The next station on the main line is (260 M.) *Rose Point* (Hotel, \$2-3), whence a ferry plies to *Parry Sound* (see above). The terminus of the line is at (264 M.) *Depot Harbour*, on *Parry Island*.



42. From Toronto to Detroit.

a. Via Grand Trunk Railway.

230 M RAILWAY in 6-8 hrs (fare \$6 60; sleeper \$2, parlor-car \$1). From *Montreal to Detroit* by this route in 16 hrs. (fare \$15; sleeper \$3 50).

Through-cars also run by this route from *Montreal* (23 hrs.) and from *Toronto* (13 hrs.) to *Chicago* (fares \$18, \$12 40; sleeper \$5, \$3). Tickets by this line are also available via *Hamilton* (comp. R 44 b). — Trunks checked through to points in the United States are examined by the custom-house officers on arrival or departure; hand-baggage is examined in crossing the St. Clair River.

This line traverses the *Peninsula of Ontario*, between Lake Erie and Lake Huron, a district of great fertility but of little interest to the tourist

Toronto, see R. 39. The train traverses the S.W. part of the town, passing the suburban stations of (2 M.) *North Parkdale* (p. 206) and (5 M.) *Toronto Junction* (6091 inhab. in 1901), and for some time runs parallel with the C.P.R. Beyond (8 M.) *Weston* we cross a stream. 21 M. *Brampton* (2748 inhab.). We cross the *Credit River* before reaching (26 M.) *Georgetown* (Bennett House, \$1-1½; 1313 inhab.), where we cross the line running to the N. from *Hamilton* to *Beeton Junction* (see p. 211). Orchards and hop-fields are passed. At (41 M.) *Rockwood* we bend to the left (S.W.). — 48 M. *Guelph* (*Royal, Wellington*, \$1½), a flourishing little city with (1901) 11,496 inhab., manufactures organs, pianos, sewing-machines, and carriage-gear. It is well known for its *Agricultural College*, the 'Cirencester of Canada' (left, 135 students). Attached to the college is an experimental farm of about 550 acres. Guelph is the junction of lines to *Galt* (p. 206) and *Harrisburg* (p. 214) and to *Warton* (on Georgian Bay), *Southampton* (Commercial, \$1½), and *Kincardine* (Park, Royal, \$1; 2077 inhab.), three small ports on Lake Huron. — From (62 M.) *Berlin* (American Ho., \$1½, 9747 inhab. in 1901), in a district largely settled by Germans, short lines run to *Waterloo* (Zimmermann Ho., \$1½) and *Galt* (p. 206). 82 M. *Shakespeare*.

88 M. *Stratford* (*Windsor*, \$2; *Albion*, \$1½-2; *Rail. Restaurant*), an agricultural and industrial city with (1901) 9959 inhab., is a railway-centre of some importance, lines radiating hence to all points of the compass. Among them is one to (45 M.) *Goderich* (Hotel *Goderich*, \$2-3, *Bedford*, \$1½-2, U. S. Com. Agent, 4158 inhab. in 1901), another port on Lake Huron, with good boating, bathing, and fishing. On the opposite side of the harbour (3 M. by road) is *Menesetung Park*, with a hotel (\$2). — 98 M. *St. Mary's* (National, *Windsor*, \$1), a small town with (1901) 3384 inhab., prettily situated on hills rising from the river *Thames* (omn. from station to town, 1½ M., 15¢). It is the junction of a branch-line to (22 M.) *London* (p. 207). — From (116 M.) *Lucan Crossing* lines run to *Goderich* (see above) and *London* (p. 207). 128 M. *Parkhill* (Hastings Ho.,

\$ 1 $\frac{1}{2}$; 1430 inhab.). Several small stations are passed, with names indicating the Scottish origin of their settlers.

170 M. Sarnia (Tunnel Station; *Vendome*, \$ 2-2 $\frac{1}{2}$, *Belchamber*, \$ 1 $\frac{1}{2}$ -2; U. S. Consul, *Mr Neal McMillan*), a brisk little port with (1901) 8176 inhab., lies on the *St. Clair River*, close to its mouth in Lake Huron. The train now enters the United States (Michigan) by a *Tunnel*, 1 $\frac{1}{6}$ M. long, under the river.

The tunnel was constructed in 1888-91 at a cost, including the approaches, of \$ 2,700,000 (540,000 l.). It consists of a cast-iron tube, with an inside diameter of 20 ft, and was designed by *Mr Joseph Hobson*. The length of the tunnel proper is 8025 ft, of the open portals or approaches 5600 ft. Throughout its entire length it perforates a bed of blue clay, with sand above and rock below. The engines used to take the trains through the tunnel have ten driving-wheels and weigh nearly 100 tons.

Examination of baggage, see p. 205. The time changes here from the Eastern to the Central standard (comp p xii).

Steamers of the *Northern Navigation Co* run from Sarnia through Lake Huron to *Mackinac Island* (p. 224) and (24 hrs) *Sault Ste. Marie* (p. 224), going on thence to points on Lake Superior

173 M. Port Huron (Tunnel Station; *Harrington*, \$ 2 $\frac{1}{2}$ -3 $\frac{1}{2}$; *Windermere*, *Four Gables*, \$ 2-2 $\frac{1}{2}$, *Rail. Restaurant*), with (1900) 19,158 inhab., lies opposite Sarnia, on the W. bank of the *St. Clair River*, and at the mouth of the *Black River*. It carries on a brisk trade in timber and fish. Large quantities of salt are produced here, and it is said that a bed of rock-salt, 100 ft. thick, underlies the locality. — Our line now turns to the left (S.). 195 M. *Lenox*; 210 M. *Mt. Clemens* (Avery, \$ 3-5; Park, \$ 2-4; Colonial; Eastman), a favourite summer-resort of the Detroiters. *Lake St. Clair* lies some distance to the left. 215 M. *Fraser*; 227 M. *Milwaukee Junction*; 229 M. *Gratiot Avenue*.

230 M. Detroit (*Cadillac*, from \$ 3, *Russell Ho.*, \$ 3-5; *The Wayne*, \$ 2-3 $\frac{1}{2}$; *Ste. Claire*, \$ 2 $\frac{1}{2}$ -3 $\frac{1}{2}$), the chief city of Michigan, with (1900) 285,700 inhab., lies on the N. bank of the *Detroit River*, connecting *Lake Erie* with Lake St. Clair, and is fully described in *Baedeker's United States*.

For the rest of the route from Detroit to *Chicago*, see *Baedeker's United States*.

b. *Viâ Canadian Pacific Railway.*

231 M. RAILWAY in 7-7 $\frac{1}{2}$ hrs (fares, etc., as at p. 205). Hand-baggage is examined in crossing the *Detroit River*. Through-cars run by this route from Montreal and Toronto to *Chicago* (fares, etc., as at p. 205). This line also traverses the peninsular part of Ontario

In leaving *Toronto* (R. 39) the train passes the suburban station of (3 M.) *Parkdale* (p. 205). At (5 M.) *Toronto Junction* (p. 205) the line to *Owen Sound* diverges to the right (see R. 46). From (22 M.) *Streetsville Junction* a line runs to (33 M.) *Orangeville* (p. 222). At (33 M.) *Milton* we cross a branch of the G.T.R. From (40 M.) *Guelph Junction* a branch-line runs to (15 M.) *Guelph* (p. 205). — 57 M. *Galt* (*Queen's*, *American Ho.*, \$ 1 $\frac{1}{2}$; U. S. Agent), a brisk little city of (1901) 7866 inhab., with manufactures of edge-tools and woollen

goods, is the junction of lines to *Berlin* (p. 205), *Harrisburg* (p. 214), and *Guelph* (p. 205). It was named after *John Galt* (1779-1839), the Scottish novelist, author of 'The Provost', etc., and father of Sir Alex. Galt (d. 1893; p. 178) and Sir Thomas Galt (d. 1901).

About 4 M. to the N. of Galt, on the railway to Guelph and also reached by electric tramway, lies *Preston* (*Hot del Monte*, \$1½-2), visited for its mineral springs, which are efficacious in gout and rheumatism.

At (75 M.) *Drumbo* we cross the G.T.R. — 88 M. *Woodstock* (*Royal, O'Neill Ho., Thompson Ho.*, \$1½), a city with (1901) 8612 inhab., makes agricultural machinery and furniture and is the focus of numerous railway-lines (to St. Thomas, Stratford, etc.). *Woodstock College* has about 150 students. — 102 M. *Thamesford*, 113 M. *Asylum*

115 M. *London* (*Tecumseh Ho.*, \$2-3; *Grigg Ho.*, \$1½-2; *Rail. Restaurant*), the ninth city of Canada, with (1901) 37,981 inhab., is the central point of what is, perhaps, the richest farming-district in the country and carries on a large trade in agricultural produce. Its industries include petroleum-refining and the manufacture of agricultural machinery and furniture. It lies on the pretty river *Thames*, in the county of *Middlesex*; and the association with its mighty protonym is further maintained by the names of its streets and bridges (*Piccadilly, Pall Mall, Regent St., Oxford St., Blackfriars, Westminster*). The city is well built and contains handsome churches (*St. Paul's*, etc.), public buildings, colleges, and an opera-house. The *Western University*, established in 1895, is attended by about 200 students. London is the junction of lines to St. Thomas, St. Mary's, Goderich, Sarnia, Hamilton, etc. Pleasant excursions may be made in the environs.

Beyond London the line bends round to the left (S.W.), running parallel with the G.T.R., which follows almost the same route from this point to Windsor. Between (126 M.) *Komoka* and (140 M.) *Appin Junction* we cross a branch of the Michigan Central R.R. — 180 M. *Chatham* (*Hotel Merrill*, \$1½; *Raymond Ho., McDonald Ho.*, \$1), also a station on the G.T.R. and the *Père Marquette R.R.*, is a flourishing agricultural centre with (1901) 9068 inhabitants. Our line crosses the *Thames* and the G.T.R. here and henceforth runs to the S. of them. Farther on we skirt the S. bank of *Lake St. Clair*. 210 M. *Belle River*. At (223 M.) *Walkerville Junction* we cross the *Père Marquette R.R.* (see below).

This line runs to the N. to (3 M.) *Walkerville*, on the Detroit River, with its large distilleries (ferry to Detroit). On the S. it runs to (27 M.) *Kingsville* (The *Mettawas*, \$4-5, *Middough's*, \$1-1½) and (35 M.) *Leamington* (2451 inhab.), on a bay of Lake Erie, the former frequented as a summer-resort. *Point Pelly*, to the S.E. of Leamington, is the southernmost point in Canada, except the island of the same name (p. 214).

228 M. *Windsor* (*International Hotel*, \$1-2; U. S. Consul, Mr *H. A. Conant*), with (1901) 12,153 inhab., lies upon the St. Clair River, immediately opposite Detroit, and contains the suburban homes of

many of its citizens. It is the W. terminus of the G.T.R. and C.P.R. and is also a station on the Michigan Central R.R. from Buffalo to Chicago. The trains are transported across the river, here $1\frac{1}{2}$ M. wide, by large steam-ferry-boats. The surrounding country produces large quantities of pears, peaches, and grapes.

231 M. Detroit, see p. 206.

43. From Toronto to Niagara (and Buffalo).

a. By Steamer.

STEAMERS of the *Niagara Navigation Co* leave Toronto 6 times every week-day for *Lewiston*, calling at *Niagara-on-the-Lake* and *Queenston* and taking $2\frac{1}{2}$ -3 hrs. to the trip. The distance is about 42 M., of which 35 M. are on the Lake of Ontario and 7 M. on the Niagara River. *Lewiston* is 7 M. ($\frac{1}{3}$ hr.) from Niagara by railway (through-fare \$1.55; restaurant on board the steamer). Through-tickets are issued by this route to Buffalo and other points in the United States. Baggage is examined by custom-house officers on the steamer. A small river-steamer runs hourly between *Lewiston* and *Niagara*.

Travellers who wish to combine a lake-voyage with a visit to *Hamilton* (p. 209) may take the steamer 'Turbinia' to that city (35 M., in 2 hrs.) and proceed thence by train as in R. 43b (fare to *Hamilton* 75 c.). The 'Turbinia' calls at *Burlington Beach* (p. 210).

The steamer starts from the *Yonge St. Wharf* (PL E, 4), passes the W. end of the island, and then steers nearly due S. across Lake Ontario. In summer the water is usually calm.

Lake Ontario (247 ft. above the sea), the easternmost and lowest of the Great Lakes, is 197 M. long and 30-70 M. wide, with an area of 7250 sq. M. Its greatest depth is 738 ft. It receives the waters of the Upper Lakes through the Niagara River and discharges at its E. end into the St. Lawrence. The shores are generally low, with few peninsulas or promontories, and possess many excellent harbours. There are few islands of any size, the most important being *Wolfe Island*, at the outlet. The first sailing-vessel on Lake Ontario was built for La Salle at the 'Cabins' (now Kingston) in 1678. Champlain named the lake *Lake St. Louis*, and it was afterwards known for a short time as *Lake Frontenac*.

On reaching the opposite shore the steamer makes its first stop at *Niagara-on-the-Lake* (*Queen's Royal Hotel*, from \$3; *The Oban*, \$2-3), a favourite watering-place situated on the left (Canadian) bank of the *Niagara River*, at the point where it enters Lake Ontario. Pop. (1901) 1258. Good boating, bathing, and fishing are obtained here. *Niagara-on-the-Lake* was originally named *Newark* and was the first capital of Upper Canada (see p. xxiii). Some remains of the old *Fort Missasaga* are still visible. An important *Lawn Tennis Tournament* (Canadian Championship) is held here in summer. On the opposite bank lies *Youngstown*, with the white *Fort Niagara*, first established in 1678 and now garrisoned by U. S. troops. Passengers who prefer it may disembark at *Niagara-on-the-Lake* and continue their journey by the Michigan Central R.R. on the W. bank.

Between its mouth and *Lewiston* the *Niagara River* runs between high wooded banks. The steamer first calls at *Queenston*, a village on the Canadian shore, and then crosses to its terminus at

Lewiston (*American Ho.*, *Frontier Ho.*, \$2), a village of 700 inhab., on the E. or American bank of the river. A fine suspension-bridge, erected in 1899, 800 ft. in span, and traversed by an electric tramway, connects Lewiston with Queenston.

The *Battle of Queenston Heights*, fought between the Americans and Canadians on Oct. 13th, 1812, ended after a severe struggle in the success of the latter. They paid for their victory with the loss of their leader *Sir Isaac Brock*, and the spot where he fell is marked by the *Brock Monument* (190 ft. high), the top of which commands a splendid view, sometimes including a dim vision of Toronto.

Passengers leave the steamer either at Queenston or Lewiston, finishing their journey in the one case by the *Niagara Falls Park and River Electric Railway* (p. 215), and in the other by the *Gorge Electric Line* (p. 215; New York Central R.R. tickets accepted) or by the *New York Central R.R.*, which runs along the E. side of the Niagara gorge, affording fine views of the *Lower Rapids* and the *Whirlpool* (comp. p. 221).

7 M. **Niagara Falls** (N. Y.), see p. 215.

Beyond Niagara Falls the railway goes on, following the river pretty closely, to (11 M. from Niagara Falls) *Tonawanda* and (22 M.) *Buffalo* (see *Baedeker's United States*).

b. By Grand Trunk Railway.

GRAND TRUNK RAILWAY to (82¼ M.) *Niagara Falls* (Ont.) or (82¾ M.) *Suspension Bridge* in 2-3 hrs. (fares \$2.60, parlor-car 50c.). Passengers for *Niagara Falls* (N.Y.) and *Buffalo* should enquire whether it is necessary to change carriages at *Suspension Bridge* and complete their journey by the N.Y.C.R.R. (through-fare to *Niagara Falls* \$2.65, to *Buffalo* \$3.15). — Luggage checked through to U.S. points is examined either before starting or on arrival; hand-baggage is examined in crossing the *Railway Bridge* (see p. 211).

Toronto, see R. 39. The train runs to the W. along the waterfront, skirting the *Exhibition Grounds* (p. 196) and passing the suburban stations of (2½ M.) *South Parkdale*, (4½ M.) *Swansea*, (6½ M.) *Mimico*, and (7 M.) *New Toronto*. Farther on it continues to run near the lake. 9 M. *Long Branch* (p. 191); 11 M. *Rifle Ranges*; 13 M. *Port Credit*, with golf-links (electric line, see p. 191); 15 M. *Lorne Park*; 16 M. *Clarkson's*. The country is fairly diversified. 21 M. *Oakville* (*Canadian Hotel*, *Oakville Ho.*, \$1½), with (1901) 1643 inhab. and large strawberry-gardens. At (31½ M.) *Burlington Crossing* a branch-line diverges to the left, leading to *Hamilton via Burlington Beach* (p. 210) but used by freight-trains only. 32 M. *Burlington*; 35 M. *Waterdown*. The fertile fruit-growing country we are now traversing is known as the 'Garden of Canada'.

39 M. **Hamilton**. — *Hotels*. *ROYAL* (Pl. b; B, 3), 79 James St. North, \$2½-4; *WALDORF* (Pl. a; B, 3), \$2-3; *OSBORNE* (Pl. c; B, 3), \$2; *COMMERCIAL* (Pl. d; B, 3), \$1½; *STOCKYARD* (Pl. f; D, 2), \$1-1½ — *Railway Restaurant*.

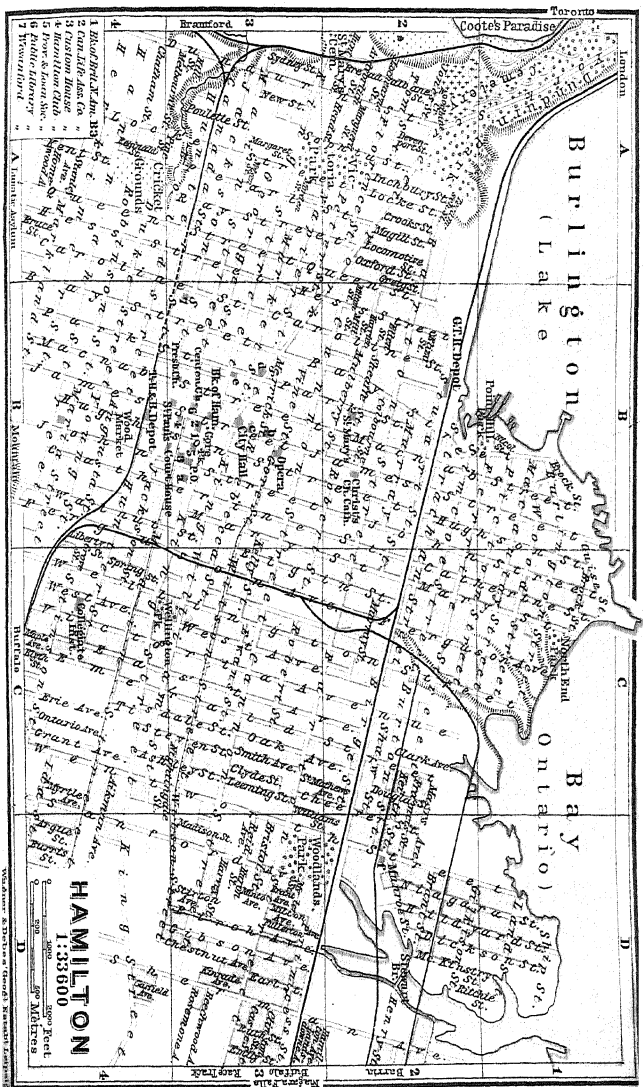
Tramways traverse the chief streets (5c.). — *Cabs* 25c. per drive within the city for each pers.; per hour, 1-4 pers., \$1. — *Post Office*, 2 John St. South (7-6). — *Grand Opera House*, James St. North — *Hamilton Club*, James St. — U. S. Consul, *Mr. James M. Shepard*.

Hamilton (255 ft.), the sixth city of Canada, with (1901) 52,634 inhab., was founded about 1810 and is pleasantly situated on *Hamilton Bay*, at the W. end of Lake Ontario, on one of the steps or terraces which surround the lake and seem to have at one time formed its shore. It carries on a very considerable commerce by land and water and has some claim to the title of the 'Birmingham of Canada' in virtue of its numerous industries (value of products in 1901, \$17,122,346; hands employed, 10,196). The products include steel, iron, cotton, and woollen goods, agricultural machinery, elevators, boots, and many other articles. Its harbour is formed by *Burlington Beach*, a sand-spit 5 M. long, resembling the island at Toronto (see p. 197), through which a short canal has been dug. Behind the town rises the so-called *Mountain* (250 ft.), part of the 'Niagara Escarpment' ('View; inclined railway to the top, 5 c.). Hamilton is well laid out and contains many substantial public and private buildings. It is the centre of the fruit district of W. Canada and the seat of bishops of the Anglican and Roman Catholic churches.

Near the centre of the city lies the pretty triangular park named the **Gore* (Pl. B, 3), formed by the convergence of York, James, and King Sts. Round it are grouped many of the principal buildings of the city, including the *Post Office* (Pl. B, 3), the *Bank of Hamilton* (Pl. B, 3), the *Custom House* (Pl. 3; B, 3), the *Bank of British North America* (Pl. 1; B, 3), and the offices of the *Canada Life Assurance Co.* (Pl. 2; B, 3) and the *Hamilton Provident & Loan Society* (Pl. 5; B, 3). The *School Buildings* are unusually handsome and substantial, and many of the *Churches* are also fine. Other important edifices are the *City Hall* (Pl. B, 3), the *Court House* (Pl. B, 3, 4), and the *Free Public Library* (Pl. 6, B, 3). On the top of the Mountain stands the large *Government Lunatic Asylum* (beyond Pl. A, 4). Many of the handsomest private residences are near the base of the Mountain, one of the finest is *Wesanford* (Pl. 7; B, 3), the home of the Hon. W.E. Sanford, with good art-collections. Among the chief industrial establishments of Hamilton are the *Hamilton Steel & Iron Co.* (with a blast furnace with a capacity of 250 tons a day), the *International Harvester Co.* (1800 hands), and the *Canadian Westinghouse Co.* — *Dundurn Park* (Pl. A, 1, 2) affords pretty walks and contains *Dundurn Castle*, with a historical museum. Hamilton has, perhaps, the best *Racecourse* in America (beyond Pl. D, 3).

Burlington Beach (*Hotel Brant*, \$ 2; see above) is, like the Island at Toronto, a favourite summer-resort of the townspeople. It is reached by the Hamilton Radial Railway (electric) and is also called at regularly by the steamer between Hamilton and Toronto (comp. p. 208); the steamboat-wharf is 1 M. from the centre of the town (tramway 5 c., cab for 1-2 pers. 50 c.).

Another pleasant short excursion may be made to (6 M.) *Dundas* (p. 214). FROM HAMILTON TO ALLANDALE, 91 M., *Grand Trunk Railway* in 4-4½ hrs. (fare \$ 2.85). — This line crosses *Burlington Beach*, and diverges to the left at (11 M.) *Burlington Crossing* (p. 208) from the above-described line to Toronto. At (21 M.) *Milton* (p. 206) we intersect the C.P.R. from Toronto to Detroit; at (32 M.) *Georgetown* (p. 205) we intersect the G.T.R. line



from Toronto to Port Huron; and at (48 M.) *Cardwell Junction* we connect with the C.P.R. branch to Owen Sound (R. 46). — At (66 M.) *Beeton*, famous for its honey, the line forks, the left branch leading to (41 M.) *Collingwood* (p. 198), while the right branch runs to (91 M.) *Allandale*, where it unites with the line to the *Muskoka District* described at p. 198.

FROM HAMILTON TO PORT DOVER, 40 M., *Grand Trunk Railway* in 8 hrs. (fare \$1.25). — *Port Dover* is a small harbour on Lake Erie.

STEAMER from Hamilton, via Toronto, to the *St. Lawrence* and *Montreal*, see p. 226.

From Hamilton to *Detroit*, see R. 44 b.

Beyond Hamilton the train runs towards the E., parallel with the S. shore of Lake Ontario, frequent views of which are obtained to the left. 45 M. *Stony Creek*; 50 M. *Winona*; 55 M. *Grimsby*; 57 M. *Grimsby Park*, a summer-resort with a large Methodist camp-meeting ground. The district we are now traversing is one vast orchard, producing large quantities of peaches and other fruit. 65 M. *Jordan*. — 71 M. *St. Catharine's* (*The Welland*, a combination of hotel and sanatorium, \$2½-3½, including baths, massage, etc.; *Grand Central*, \$1½; *U. S. Agent*), a prettily-situated little city with (1901) 9946 inhab., lies to the left (N.) of the railway, on the *Welland Canal* (see below). It carries on ship-building and other industries, which are greatly facilitated by its cheap and abundant electric power. Its saline springs, efficacious in rheumatism, gout, skin-diseases, and nervous prostration, attract numerous visitors. The *Bishop Ridley College* is a Church of England institution attended by about 150 boys.

The *Welland Ship Canal*, originally built about 1824 and reconstructed in 1875, runs from *Port Dalhousie*, on Lake Ontario, to *Port Colborne*, on Lake Erie, a distance of 26¾ M., and affords an outlet from the Upper Lakes to the *St. Lawrence* and the sea for vessels of 1500 tons. The canal is 14 ft. deep and 100 ft. wide at the bottom, it is to be deepened to 20 ft. About 1,500,000 tons of goods are annually carried through it.

St. Catharine's is also connected by railway with (3 M.) *Port Dalhousie* (also electric tramway) and (22 M.) *Port Colborne*.

At (73 M.) *Merritton* (1710 inhab.) the train crosses the *Welland Canal* (see above) by a bridge.

Near *Merritton* is the battlefield of *Beaver Dams* (June 24th, 1813), marked by a small monument, where Ensign Fitzgibbon, with 40 British soldiers and 200 Indians, captured an American force of 650 men. The British outpost here was warned of the American approach by the heroism of *Mrs. Laura Secord*, who traversed 20 M. of Indian-haunted forest alone and on foot.

The Canadian town of (82¼ M.) *Niagara Falls* (*Lafayette*, \$2½-3½; *Hotel Rosli*, \$2½-3; *U. S. Consul*, *Mr. W. H. Webster*), with (1901) 4244 inhab. (including *Clifton*), lies at the W. end of the *Railway Bridge* (p. 220). It is a manufacturing place (value of products in 1901, \$422,728) and is not very conveniently situated for visitors to the Falls (see, however, the note on the electric railway at p. 215). The new *Collegiate Institute* is a handsome building.

The train moves slowly across the bridge (unobstructed view of the *Whirlpool Rapids*, p. 221) to the (82¾ M.) *Suspension Bridge*.

Station† (hand-baggage examined, see p. 209), where passengers sometimes change carriages for the N. Y. C. line to (2 M.) the American town of *Niagara Falls* (see p. 215).

c. By Canadian Pacific Railway.

99 M. CANADIAN PACIFIC RAILWAY to (82 M.) *Welland* in 2 hrs., MICHIGAN CENTRAL RAILROAD thence to (17 M.) *Niagara Falls* (N. Y.) in $\frac{3}{4}$ hr. (fares, etc., as at p. 209).

Between Toronto and (39 M.) Hamilton the C. P. R. trains run over the lines of the G. T. R. (R. 43b).

Beyond Hamilton the train follows the tracks of the *Toronto, Hamilton, & Buffalo Railway*, which runs in an almost straight line (S.E.) to Welland. — 43 M. *Bartonville*; 46 M. *Stony Creek*; 55 M. *Vinemount*, 60 M. *Grassie's*; 63 M. *Smithville*; 71 M. *Silverdale*; 78 M. *Chantler's*. At (82 M.) *Welland* (p. 213), on the Welland Canal (p. 211), we cross the line from St. Catharine's to Port Colborne (p. 211). Hence to (99 M.) *Niagara Falls*, see p. 213.

44. From Detroit to Buffalo.

Detroit and Buffalo are both in the United States, but the direct routes between them pass almost wholly through Canadian territory.

a. Via Michigan Central Railroad.

251 M. RAILWAY ('*Niagara Falls Route*') in 6-7 hrs. (fare \$7, sleeper \$2). This line runs along the N. shore of Lake Erie, through Ontario, and affords a good view of Niagara Falls (see p. 213). It forms part of one of the great through-routes between New York and Chicago (see *Baedeker's United States*). Luggage checked through to United States points is not examined; luggage from Canadian points is examined in crossing the Cantleaver Bridge (p. 220).

From Detroit (p. 206) we cross the Detroit River to (1 M.) *Windsor*, as described at p. 208. The line runs at first towards the S.W., but turns abruptly to the left at (15 M.) *Essex Centre*, the junction of a branch-line to (16 M.) *Amherstburg* (Lakeview Ho., \$1 $\frac{1}{2}$; U. S. Consul, *Mr. C. W. Martin*; 2222 inhab.). The country traversed is flat and fertile, without great scenic attractions. The section between Fargo and St. Thomas is almost absolutely straight, forming one of the longest railroad-tangents in the country. From (31 M.) *Comber* a branch runs to (14 M.) *Leamington* (p. 207). At (57 M.) *Fargo* we intersect the Erie & Huron R.R. 68 M. *Ridgetown* (Benton Ho., \$1 $\frac{1}{2}$; 2405 inhab.); 91 M. *Dutton*.

112 M. *St. Thomas* (*Grand Central*, \$2-2 $\frac{1}{2}$; *Columbia*, \$1 $\frac{1}{2}$; U. S. Consul, *Mr. M. K. Moorhead*), a thriving city of (1901) 11,485 inhab., with various industries and a trade in agricultural produce, is

† This name is somewhat of a misnomer since the construction of the new bridge (see p. 220).

the junction of lines to *Glencoe*, London (p. 207; 15 M.), Toronto (p. 190), etc. A short branch-line runs to the S. to (8 M.) *Port Stanley* (Fraser's Hotel, \$ 1-2), a harbour and summer-resort on Lake Erie, with a fine sandy beach. — Near (131 M.) *Brownsville* is the large Lactomen Factory, for the production of dried milk. Farther on we cross two branches of the G. T. R. — From (159 M.) *Waterford* a line runs to (17 M.) *Brantford* (*Kerby Ho.*, \$ 2; *Commercial*, \$ 1½; *U. S. Agent*), a city of (1901) 16,619 inhab., with manufactures of agricultural implements, stoves, waggons, and bicycles. It is named after the famous Mohawk chief *Brant*, who remained loyal to England at the American Revolution and migrated hither, with part of his tribe, after the close of the war. A fine monument to him has been erected in Victoria Square. Brantford, which is known for its high-class schools, is the headquarters of the amalgamated tribes of the Six Nations. Brant is buried in the old *Mohawk Church*, 2 M. from the city, where services are still held in the Mohawk dialect. The *Bow Park Farm*, with its famous thoroughbred stock, lies 3 M. from the city. — At (171 M.) *Hagersville* we cross the G. T. R. line from Hamilton to Port Dover (see p. 210) and at (185 M.) *Canfield* the G. T. R. line from Buffalo to Goderich (p. 205). — 213 M. *Welland* (*Dexter Ho.*, Arlington, \$ 1½), with (1901) 1863 inhab. and large cordage-works, is one of the prosperous little settlements that have sprung up along the Welland Canal (p. 211). From this point a short line runs direct to (23 M.) *Buffalo*, via *Bridgeburg* and the *International Bridge*, but our line turns to the left (N.E.) and reaches the *Niagara River* at (223 M.) *Falls View*, where all trains stop five minutes to allow passengers to enjoy the splendid **View of Niagara Falls* (p. 216). The train then runs to the N. to (225 M.) *Victoria Park* (p. 219), and (226 M.) *Niagara Falls, Ont.* (p. 214), whence it crosses the Niagara by the Cantilever Bridge (p. 220; **View of the rapids*) to (227 M.) *Suspension Bridge* (p. 212). Thence to (229 M.) *Niagara Falls, N. Y.*, and (251 M.) *Buffalo*, see pp. 212, 209.

Beyond Niagara Falls (Ont.) the Michigan Central R.R. runs to the N. to (6 M.) *Queenston* (p. 208) and (13 M.) *Niagara-on-the-Lake* (p. 208).

b. Viâ Grand Trunk Railway.

255 M. RAILWAY in 7-8 hrs. (fares, etc., as at p. 212; parlor-car \$ 1¼). This line runs viâ London, Hamilton, Suspension Bridge, and Niagara Falls (N. Y.)

From *Detroit* (p. 206) we cross to (1 M.) *Windsor* (p. 207) as at p. 208. From Windsor to (110 M.) *London* (p. 207) the route is substantially the same as that followed by the C.P.R. (R. 42b). The chief intermediate station is (46 M.) *Chatham* (p. 207).

Beyond London the line continues to follow a general N.E. direction. 130 M. *Ingersoll* (Atlantic Hotel, \$ 1½). At (138 M.) *Woodstock* (p. 207) we touch the C.P.R. line to Toronto and cross the G.T.R. line to Goderich (p. 205). 157 M. *Paris* (Arlington,

\$1½, U. S. Agent); 167 M. *Harrisburg* (Rail. Restaurant), a rail way-junction of some importance (comp. p. 205). — 180 M. *Dunda* (Riley Ho., \$1½), a town with (1901) 3173 inhab., is older than Hamilton and was at one time a rival. The scenery here is very attractive. — 186 M. *Hamilton* (Rail Restaurant), see p. 209.

From Hamilton to (230 M.) *Niagara Falls* (N.Y.) and (255 M.) *Buffalo*, see pp. 211, 209.

c. By Steamer.

The large and admirably equipped steamers of the *NORTHERN STEAMSHIP Co* ply from Detroit to *Cleveland* (fare \$2.25) and *Buffalo* (\$4.75), twice weekly, taking 18-20 hrs to the journey. Meals à la carte. — The smaller and slower steamers of the *ANCHOR LINE* ply thrice fortnightly, taking about one day (fare \$6½, including berth and meals). They call at *Cleveland* (\$3) and *Erie* (\$5). Warm wraps should be taken even in midsummer. For fuller details and an account of the voyage all the way between Buffalo and Chicago, see *Baedeker's United States*.

Detroit, see p. 206. The steamer first descends the *Detroit River*, which varies in width from 4 M. at its mouth to ½ M. opposite Detroit. It generally presents a very animated sight; and some idea of the traffic on the Great Lakes may be gathered from the fact that at least 60,000 vessels pass Detroit yearly in the seven months during which navigation is open, carrying about 50 million tons of freight.

Lake Erie (573 ft. above the sea), which we reach about 18 M. from Detroit, the second (counted from the E.) of the Great Lakes, is 250 M. long and 40-60 M. wide, with an area of 9900 sq. M.

It is by far the shallowest of all, having an average depth of 85 ft. and a maximum depth of 210 ft. It communicates with Lake Huron by the Detroit River (see above) and pours its waters into Lake Ontario by the Niagara River (see p. 216). It is the scene of a very busy navigation. The first vessel to navigate the lake was built on the Niagara River by La Salle in 1679, and the first steamboat was launched in 1818.

The steamer passes the **Put-in-Bay Islands*, a favourite summer-resort (several hotels), about 20 M. from the mouth of the Detroit; the largest is *Pelée Island*, 8 M. from *Point Pelée* (p. 207) and belonging to Canada. We then steer for the S. (U.S.) shore.

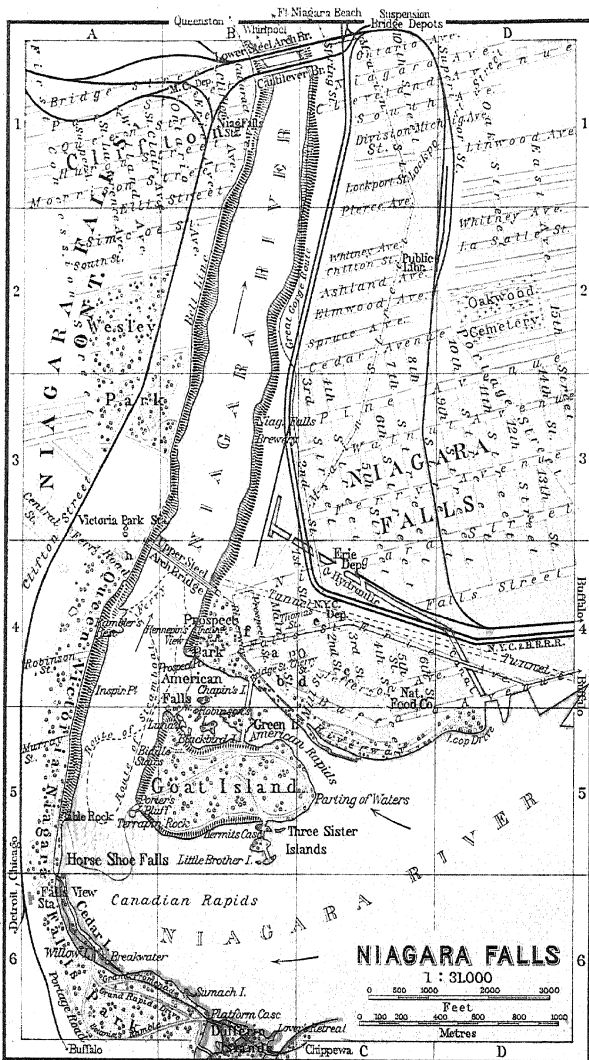
65 M. (from Detroit) *Sandusky* is passed without a stop. The coast farther on is varied and picturesque.

115 M. *Cleveland* (580 ft.; *Hollenden*, R. from \$1; *Euclid*, R. from \$1; *Colonial*; *Forest City*, \$2-3), the largest city of Ohio, with (1900) 381,768 inhab. and large iron and steel works, is fully described in *Baedeker's United States*.

Cleveland is one of the most beautiful cities on the Great Lakes, and is seen to advantage from the steamer. The *Garfield Memorial*, over the grave of *President Garfield*, is conspicuous to the E. of the city.

Beyond Cleveland the steamer runs near the well-wooded shore.

210 M. *Erie* (*Reed Ho.*, \$2-4½; *Liebel Ho.*, \$2-2½; *Union Depot Hotel*), a shipping-port of Pennsylvania, with (1900) 52,733 nhab. and a good harbour, sheltered by *Presque Isle*, was the head-



quarters of *Commodore Perry* when he defeated the Anglo-Canadian fleet in 1813. This is usually the last point touched at, *Dunkirk* and other places being passed over.

290 M. *Buffalo* (*Iroquois*, \$4-5, R. from \$1½; *Lenox*, R. from \$1½; *Lafayette*; *Genesee Ho.*, from \$3, R. from \$1), see *Baedeker's United States*.

45. Niagara Falls.

Railway Stations. *New York Central* (Pl. C, 4), cor. of Falls St. and Second St., also used by the Michigan Central, West Shore, Lehigh Valley, and the R. W. & O. Railways; *Erie Depot* (Pl. C, 4), cor. of Niagara St. and Second St. — The Canadian lines make connection for Niagara Falls at *Suspension Bridge* (Pl. C, 1; p. 212), 2 M. to the N.; and there are also stations on the Canadian side at *Niagara Falls (Ontario)* (Pl. B, 1), *Victoria Park* (Pl. A, 3), and *Falls View* (Pl. A, 6; comp. p. 213). — *Niagara Falls, N.Y.*, is also connected with *Suspension Bridge* by tramway (5c).

Hotels. *INTERNATIONAL HOTEL* (Pl. a; B, 4), \$3-5½; *CATARACT HOTEL* (Pl. b; B, 4), close to the river, \$3-5½, these two under one management (all meals served in the International); *PROSPECT HOUSE* (Pl. c; C, 4), \$3½-5½; *KALTENBACH* (Pl. d; C, 4), German, well spoken of, from \$3; *IMPERIAL* (Pl. e; C, 4), \$2½-4; *TOWER* (Pl. f; B, 4), \$2½-4. The first two are open in summer only. These are all on the American side, in the city of *Niagara Falls* (p. 217) — **CLIFTON HOUSE* (Pl. h, A 4; re-opened in 1906), on the Canadian side, near the Upper Steel Arch Bridge, with a fine view of the Falls, from \$4, with bath from \$5; *LAFAYETTE* (Pl. g; A, 3), opposite the Canadian end of the Upper Steel Arch Bridge, \$2½-3½, both open all the year round.

Carriages. The former extortionate charges and impertinent demeanour of the Niagara hackmen have been somewhat abated, but the cab-touts at the station are scarcely to be trusted. The rates are \$1½ for the first and \$1 for each addit. hr., with two horses \$2 and \$1½; but it is always advisable to make a distinct bargain with the driver, and lower terms than the legal rates may often be obtained, especially by a party. It should be expressly stipulated who is to pay the tolls in crossing the bridges, etc.; and the driver should be strictly enjoined not to stop at the bazaars or other pay-places unless ordered to do so. A single-horse conveyance should not cost more than \$3 for half-a-day or \$5 for a whole day, and small carriages for 1-2 pers. are generally obtainable for \$1 per hour. — *Park Vans* make the round of the American Reservation at frequent intervals (fare 25c., for Goat Island 15c.), and passengers are entitled to alight at any number of points and finish the round by any subsequent vehicle on the same day. — *Omnibus* from the station to the hotels 25c.

Electric Tramways. The *INTERNATIONAL RAILWAY* runs along the Canadian bank from *Queenston* (p. 208; see Pl. B, 1) to (11½ M.) *Chippawa* (beyond Pl. C, 6; p. 221; fare 45c.), taking 1 hr. to the trip. The intermediate stations are *Brook's Monument* (p. 209; fare 10c.), the *Whirlpool* (p. 221, 20c.), *Niagara Falls Town* (p. 211; 25c.), and *Niagara Falls Park* (p. 219, 30c.). The *NIAGARA GORGE RAILROAD* ('Great Gorge Route'), on the American side, runs through the gorge and along the brink of the river to (7 M.) *Lewiston* (p. 208; fare 50c., there and back 75c.), and thence on to *Youngstown* and (14 M.) *Fort Niagara* (p. 208; 65c., 95c.) — These lines afford admirable views of the rapids, gorge, and falls. Visitors are recommended to take the Canadian line to *Queenston*, cross the suspension-bridge to *Lewiston* and return on the American side (or vice versa; round-trip fare \$1). This is known as 'The Niagara Belt Line'. Evening-excursions are sometimes arranged, with search-light effects on the rapids and whirlpool. 'Stopovers' are allowed on these lines without extra charge. — An electric railway also runs from *Niagara* to *Buffalo* (13¼ hr.; fare 35c., return-fare 50c.).

Fees. Since the establishment of the American and Canadian National Parks and Reservations, most of the former extortionate fees have been abolished; and any visitor who is able to walk a few miles can see all the chief points at very little cost. Goat Island and all the best views of the Falls are free; and the only extra expenses which the visitor is advised to incur are the trip in the '*Maid of the Mist*', including the visit to the Canadian side (50c.), the *Cave of the Winds* (\$1; or the similar trip on the Canadian side, 50 c.), and the view of the *Whirlpool Rapids* (50 c.).

Photographs. Among the best photographs of Niagara are those of *Zybach & Co.*, Niagara Falls, Ontario (p. 211)

Reservations. The *New York State Reservation at Niagara* comprises 107 acres and was opened in 1835. It includes *Prospect Park* and *Goat Island* — The *Queen Victoria Niagara Falls Park*, extending along the river on the Canadian side all the way from Lake Erie to Lake Ontario, covers 787 acres; the Park Reservation in the immediate neighbourhood of the Falls contains 196 acres

Plan and Season of Visit. The description in the text follows the best order in which to visit the Falls. The American side is seen to greatest advantage in the morning, the Canadian side in the afternoon, the sun being then at our backs as we face the Falls. The Whirlpool Rapids are best seen from the Canadian side. It is possible to see all the chief points in one day, but it is better to allow 2-3 days for the visit. May, the first half of June, the second half of Sept., and Oct. are good seasons to visit Niagara, which is hot and crowded in midsummer. No one who has an opportunity to see them should miss the Falls in the glory of their winter-dress.

The ****Falls of Niagara** ('Thunder of Waters'), perhaps the greatest and most impressive of the natural wonders of America, are situated on the *Niagara River*, 22 M. from its head in Lake Erie and 14 M. above its mouth in Lake Ontario. This river forms the outlet of the four great Western lakes (Erie, Huron, Michigan, and Superior), descending about 330 ft. in its course of 36 M. and affording a channel to a large part of the fresh water of the globe. Its current is swift for about 2 M. after leaving Lake Erie, but becomes more gentle as the channel widens and is divided into two parts by *Grand Island* (p. 221). Below the island the stream is 2½ M. wide. About 15 M. from Lake Erie the river narrows again and the rapids begin, flowing with ever-increasing speed until in the last ¾ M. above the Falls they descend 55 ft. and flow with immense velocity. On the brink of the Falls, where the river bends at right angles from W to N., the channel is again divided by *Goat Island*, which occupies about one-fourth of the entire width of the river (4770 ft.). To the right of it is the ***American Fall**, 1060 ft. wide and 167 ft. high, and to the left of it is the ****Canadian or Horseshoe Fall**, 158 ft. high, with a contour of 2550 ft. The volume of water which pours over the Falls is 12 million cubic ft. per minute (nearly 1 cubic mile per week), of which probably nine-tenths go over the Canadian Fall†. The cloud of spray and vapour hanging over the Falls is visible for miles. Immediately at the foot of the Falls the water is so smooth that it generally freezes over in winter, forming the so-called 'Ice Bridge'. The river then contracts to 1000-1250 ft., and

† The International boundary passes near Terrapin Rock (p. 219), thus leaving a small part of the Horseshoe Fall in American territory

rushes down foaming and boiling between lofty rocky walls. Two miles farther down it is barely 800 ft. wide, and at the Whirlpool (p. 221) the huge volume of water is compressed into a space of 250 ft. Within 7 M. these lower rapids descend over 100 ft., but at Lewiston the river once more becomes wider, smoother, and navigable.

The gorge through which the river runs has been formed by the action of the vast body of water rushing through it, and the Falls themselves are receding up the river at a rate which in 1842-90 averaged 5 ft. per annum in the centre of the Horseshoe Fall and $\frac{2}{3}$ ft. in the American Fall. The rocks passed through by the receding falls are sandstone, shale, and limestone. At present the formation over which the water pours is limestone, with shale lying 80-90 ft. below it; and the frequent fall of great masses of limestone rock is undoubtedly occasioned by the erosion of the underlying shales. At the Whirlpool the continuity of the rock-formation is interrupted, and the whole wall of the ravine is formed of drift. Geologists tell us that a farther retrocession of about 2 M. will cut away the layers of both limestone and shale and leave the falls stationary on the sandstone, with their height reduced about 50 per cent.

Niagara Falls appear under the name of Ongiara in Sanson's Map of Canada (Paris, 1657), but the first white man known to have seen Niagara Falls was *Father Hennepin*, a member of La Salle's party in 1678. He described them as 'a vast and prodigious Cadence of Water, which falls down after a surprising and astonishing manner, insomuch that the Universe does not afford its Parallel . . . The Waters which fall from this horrible Precipice do foam and boyl after the most hideous manner imaginable, making an outrageous Noise, more terrible than that of Thunder; for when the Wind blows out of the South, their dismal roaring may be heard more than 15 leagues off'. The sketch he made of the Falls shows several points of difference from their present state.

The Indians have a tradition that the Falls demand two human victims every year; and the number of accidents and suicides is perhaps large enough to maintain this average. Many lives have been lost in foolhardy attempts to cross the river above Goat Island.

The American city of **Niagara Falls** (hotels, see p. 215) closely adjoins the river and in 1900 contained 19,457 inhab. (as compared with 5502 in 1890). The chief source of its prosperity has long been the influx of sightseers; but it is now, thanks to the tapping of the Falls by tunnels and power-canals (see below), rapidly becoming an industrial centre of great importance. It is estimated that about 700,000 tourists visit the Falls yearly.

Within the past few years the authorities of Canada and the United States have authorized the subtraction of water from Niagara for industrial purposes to the extent of no less than 750,000 horse-power; and already 80,000 h. p. is ready for use on the Canadian side and 140,000 h. p. on the American side. So far the general appearance of the Falls has been little marred by these operations (except for the intrusion of power-houses and distributing-stations on the Canadian shore), but a good deal of apprehension exists as to the possible diminution of the grandeur of Niagara, and it is hoped that an international agreement may be arrived at to secure a *modus operandi* that will satisfy at once the demands of the industrialists and those of the lovers of natural beauty. On the American side a tunnel (Pl. B-D, 4), 29 ft. deep and 18 ft. wide, has been excavated through the solid rock from a point just below the Upper Steel Arch Bridge to a point about $1\frac{1}{4}$ M. above the Falls, where it is 165 ft. below the level of the river. It passes below the city at a depth of about 200 ft. A short canal diverts a portion of the river to the head of the tunnel, where a maximum of 120-150,000 horse-power is attained. A similar tunnel on the Canadian side is 2000 ft. long, 26 ft. high, and 23 $\frac{1}{2}$ ft. wide. The largest steel flume in the world, 13 ft.

in diameter, runs below the Canadian National Park, carrying enough water to develop 60,000 horse-power. The furthest point to which the power of Niagara has so far been transmitted is Syracuse, 160 M. distant. The power derived from Niagara is used not only in manufacturing but also for the lighting of several towns and for hundreds of miles of electric railways.

The traveller should undoubtedly visit one of the power-houses, where he will receive an impression of weird force hardly unworthy of mention beside that produced by the Falls themselves. The intake-canals, the wheel-pits, the huge 'penstocks' or vertical inlet-pipes, the turbines, the generators, etc., are all full of interest even for the non-professional visitor. The powerhouse of the *Niagara Falls Co.* (80,000 h. p., adm. 25 c.; guide), on the American side, is easily reached by the Buffalo trolley or any of the cars marked 'Power House'. The *Ontario Power Co.* (50 c., p. 220) and the *Canadian Niagara Power Co.* (25 c.), both on the Canadian side, also admit visitors. — With the Niagara Falls Co. Power House may be combined a visit to the *Natural Food Conservatory* (Pl. C, 4), in Buffalo Ave. where the well-known shredded-wheat biscuits are made. Besides the processes of manufacture, the visitor will find many features of interest in the arrangement of the factory, including the employees' dining-rooms, the marble bathroom, and the auditorium. Guides are provided to show visitors over the huge building (no charge). Splendid view from roof-observatory.

We may begin our visit to the Falls by entering **Prospect Park** (Pl. B, 4), 12 acres in extent, which adjoins the gorge close to the American Fall. At **Prospect Point*, protected by an iron parapet, we stand on the very brink of the Fall and see it dash on the rocks below. *Hennepin's View*, a little to the right (N.), commands a good general *View. Near the point is the *Superintendent's Office*, whence an *Inclined Railway* (5 c.) and a *Flight of Steps* descend to the bottom of the gorge and the dock of the 'Maid of the Mist' (p. 220).

Following the parkway to the left (W.) from Prospect Point, we reach (3 min.) the *Goat Island Bridge* (360 ft. long), crossing the right arm of the river, a little above the American Fall. It commands a fine view of the **Upper Rapids*. To the right are several little rocky islets, including *Avery's Rock*, where an unfortunate man found foothold for 18 hrs. before being swept over the fall by the impact of a boat let out with ropes in an attempt to save him. The bridge ends at *Green Island* (Pl. B, 5), whence another short bridge crosses to **Goat Island* (80 acres in extent). Here we follow the path to the right to (4 min.) **Luna Island* (Pl. B, 5), a rocky islet between the main American Fall and the **Centre Fall*, named from the lunar rainbows seen here at full moon. The continuation of the path along the W. side of Goat Island leads in a minute or two more to the *Biddle Stairs* (free) and the office where a guide and dress are obtained for a descent to the **Cave of the Winds* (Pl. 'C. of W.', B 5; fee \$1; small gratuities expected).

Everyone should descend the stairs and follow the path along the foot of the cliffs towards the base of the Centre Fall; but only those of strong nerves should attempt the trip through the Cave of the Winds, which, however, is said to be safe and is often made by ladies. For those who can stand it the experience is of the most exciting and pleasurable description. After passing over the gangways and bridges amid the rocks and spray in front of the Centre Fall, we are conducted through the 'Cave of the Winds' behind it, where the choking, blinding, and deafening tumult of wind and water defies description. The visitors grasp each

other by the hand and side through on a narrow ledge, with a perpendicular wall of rock within an inch of their noses and the mighty volume of the fall at their backs

Beyond the Biddle Stairs the path on Goat Island leads to (4 min.) *Porter's Bluff* (Pl. A, 5), overlooking the Horseshoe Fall, the Canadian Rapids, and the gorge below the Falls. A staircase and bridge descend hence to **Terrapin Rock* (Pl. A, 5), on the edge of the Horseshoe Falls, affording the best view of these from this side.

'The river here is evidently much deeper than the American branch, and instead of bursting into foam where it quits the ledge, it bends solidly over and falls in a continuous layer of the most vivid green. The tint is not uniform, but varied, long strips of deeper hue alternating with bands of brighter colour . . . From all this it is evident that beauty is not absent from the Horseshoe Fall, but majesty is its chief attribute. The plunge of the water is not wild, but deliberate, vast, and fascinating' (*Tyndall*). — A condemned warship sent over the Fall in 1829 drew 18 ft. of water, but passed without touching the ledge.

Our path next leads along the S. side of Goat Island to (7-8 min.) the series of bridges leading to the **Three Sister Islands* (Pl. B, 5), which afford the best view from this side of the imposing **Canadian Rapids* (Pl. A, B, 6), running at the rate of 30 M. an hour. The Third Sister is adjoined by a smaller rock known as the *Little Brother*.

We may now return through the centre of Goat Island to (5 min.) the bridge leading to the mainland, but those who have time should follow the path to (4 min.) the 'Parting of the Waters' at the head of Goat Island (Pl. C, 5), where we obtain a good view of the broad and quiet river above the cascades, with *Grand Island* (p. 221) in the background. Thence the path leads back along the N. side of Goat Island, affording a view of the *American Rapids* (Pl. B, C, 5), to (5-6 min.) the bridge.

We may now cross to the Canadian side of the river by the **Upper Steel Arch Bridge* (Pl. B, 4), about 250 yds. below the American Fall, erected in 1897-98 to take the place of the suspension-bridge formerly at this spot. The main span, the largest of the kind in the world, is 840 ft. long, while the flanking spans increase the total length of the bridge to 1240 ft. It is 49 ft. wide. An electric tramway crosses in the centre, and on each side are carriage-ways and footpaths. The bridge is 195 ft. above the level of the water. Bridge-toll 10 c., return 15 c., incl. tramway-fare. — Just below the bridge, on the American shore, is the mouth of the tunnel described at p. 217. On the bank above is a group of mills and factories, run by the power of a surface-canal.

On reaching the Canadian end of the bridge, we turn to the left and reach (3 min.) the entrance to the **Queen Victoria Niagara Falls Park* (Pl. A, 4-6), which extends along the river for $2\frac{1}{2}$ M. (electric railway, see pp. 215, 209) The park contains a good bronze statue (by Dunbar) of *Colonel Gzowski* (1813-99), its chief promoter. Splendid general views are obtained as we proceed of the Falls and the gorge, especially from the (3 min.) **Rambler's Rest* (Pl. A, 4) and

(4 min.) **Inspiration Point* (Pl. A, 4) To the right, 3-4 min. farther on, are *Picnic Grounds* and a *Restaurant*; and in 3 min. more we reach the entrance to the power-house of the *Ontario Power Co.* Just beyond are the *Table Rock House* and ***Table Rock* (Pl. A, 5), which affords an indescribably grand view of the Horseshoe Falls. Beautiful rainbows are seen on the spray in the afternoon. The roar of the water is deafening.

The name of *Table Rock* still adheres to this point, though the last portion of the overhanging ledge that gave rise to it fell into the abyss in 1850. — An elevator here affords an opportunity to those who wish to go under the Falls (25 c., with dress 50 c.). This trip does not necessitate the removal of clothing, but only the protection of oil-skin suits. It has lately been improved by the construction of a tunnel (800 ft long) and now affords imposing **Views of the Falls from behind and below.*

Visitors with time to spare may extend their walk through the Park above the Falls to (1 M.) **Dufferin Islands* (Pl. B, 6), enjoying the best views of the Canadian Rapids (p. 219). No time need be wasted on the so-called *Burning Spring* (adm. 50 c.). — *Falls View Station* of the Michigan Central R. R. (Pl. A, 6; see p. 213), lies just outside the Park — A road diverging near *Table Rock* leads to *Lundy's Lane*, where a bloody but somewhat indecisive struggle took place on July 25th, 1814, between the Americans and the Anglo-Canadians. The latter, however, were left in possession of the field, the Americans retiring on Fort Erie. A monument has been erected to the Canadians who fell in the battle.

No one should omit to take the ***Trip* in the little steamer the *Maid of the Mist*, which starts near the foot of the Inclined Railway descending from the end of Prospect Park (see p. 213), steams up the river nearly to the foot of the Horseshoe Fall, and touches at a wharf on the Canadian side (fee 50 c., incl. water-proof dress). The ***View* it affords of the Falls is one of the best to be had; and the trip is perfectly safe. Passengers may disembark on the Canadian side (where an incline ascends to the National Park) and return by any later trip of the steamer the same day.

The river and its banks below the bridge offer many points of great interest. The Lower Rapids and the Whirlpool (p. 221) are both seen to greatest advantage from the Canadian side.

From the N. end of the bridge we follow the road (electric railway, see p. 215) descending along the edge of the cliff to (2 M.) the **Cantilever Bridge* of the *Michigan Central Railroad* (Pl. B, C, 1), one of the first examples of this method of construction, completed in 1883. It is entirely of steel and has a total length of 900 ft. The two cantilever arms, 395 ft. and 375 ft. long, are connected in the centre by a fixed span of 125 ft. It is 245 ft. above the water. About 100 yds. below this bridge is the **Lower Steel Arch Bridge* of the *Grand Trunk Railway* (Pl. B, 1), erected in 1897 on the site of the former *Railway Suspension Bridge* (comp. p. 212), with a roadway below the railroad track (toll 10 c., incl. return). The length of this bridge, including approaches, is 1100 ft., half of which is absorbed by the arch itself. The highest point is 226 ft. above the water. It commands a fine view of the Whirlpool Rapids (p. 221), but the view of the Falls is obstructed by the Cantilever Bridge.

A little below the Steel Arch Bridge is the entrance to the so-called *Rapids Park*, where we descend an Inclined Railway (50 c.) to view the *Whirlpool Rapids, which in their own way are as wonderful as the Falls. The immense volume of water is here forced to flow through so narrow a channel (300 ft.) that it actually assumes a convex form, the centre of the river being 20 ft. higher than the edges.

The impression of force is overwhelming. 'The surges did not look like the gigantic ripples on a river's course, as they were, but like a procession of ocean billows, they rose far aloft in vast bulks of clear green, and broke heavily into foam at the crest' (*Howells*).

It was in an effort to swim down these Rapids that Capt. Webb lost his life in 1833, but since then several persons have passed through them safely in barrels. The old 'Maid of the Mist' was successfully piloted through the Rapids to Lewiston in 1861. Blondin and others have crossed the gorge above the Rapids on ropes of hemp or wire.

Near the wooden staircase ascending to the *Devil's Hole* is a tablet commemorating an Indian massacre in 1783.

We may now cross the railway-bridge and return along the American side (tramway, see p. 215).

About 1 M. below the Railway Bridges is the *Whirlpool (beyond Pl B, 1), of which we get a good distant view from the top of the cliff. The river here bends suddenly at right angles to its former course, and the Whirlpool is occasioned by the full force of the current impinging against the cliffs of the left bank.

'Here within the compass of a mile, those inland seas of the North, Superior, Huron, Michigan, Erie, and the multitudes of smaller lakes, all pour their floods, where they swirl in dreadful vortices, with restless undercurrents boiling beneath the surface of that mighty eddy. Abruptly from this scene of secret power, so different from the thunderous splendours of the cataract itself, rise lofty cliffs on every side, to a height of two hundred feet, clothed from the water's edge almost to their crests with dark cedars. Noiselessly, so far as your senses perceive, the lakes steal out of the whirlpool, then, drunk and wild, with brawling rapids, roar away to Ontario through the narrow channel of the river. Awful as the scene is, you stand so far above it that you do not know the half of its terribleness; for those waters that look so smooth are great ridges and rings, forced, by the impulse of the currents, twelve feet higher in the centre than at the margin. Nothing can live there, and with what is caught in its hold, the maelstrom plays for days, and whirls and tosses round and round in its toils, with a sad maniacal patience' (*Howells*).

The RIVER ROAD ascends along the American side of the river from Goat Island Bridge to (1 M.) the *Old French Landing*, where La Salle and Father Hennepin are said to have embarked in 1678 after their portage from Lewiston. Nearly opposite, on the Canadian shore, is the village of *Chippawa*, where the Americans defeated the English in 1814. This is the terminus of the Electric Railway (p. 215). About 1 M. farther up is the *Schlösser Landing*, fortified by the French in 1750 and by the English in 1761. *Navy Island*, near the Canadian shore, gave shelter to the insurgents of the 'Mackenzie War' (1837-38; comp. p. 192). Just above is *Grand Island* (26 sq. M. in area; comp. p. 216; *Bedell Ho.*, a popular summer-hotel, \$ 2-3), where Major Noah in 1820 proposed to found the city of Ararat, as a universal refuge for the Jews. Opposite Grand Island, on the American shore, 5 M. above the Falls, is the mouth of the *Cayuga*, where La Salle launched the 'Griffon', the first vessel to navigate the Great Lakes (1679).

The *Observation Trains* of the N.Y.C.R.R. between *Niagara Falls* and (7 M.) *Lewiston* (return-fare 25 c.) afford admirable *Views (to the left) of the gorge of the Niagara (see R. 43 a).

About 8 M. to the N.E. of Niagara Falls is the *Reservation of the Tuscarora Indians* (baskets, etc., for sale).

From Niagara to *Buffalo*, see p. 203; to *Lewiston, Niagara-on-the-Lake*, and *Toronto*, see R. 43a; to *Hamilton*, see R. 43b; to *Queenston*, see p. 209; to *Detroit*, see R. 41.

46. From Toronto to Owen Sound and Fort William.

677 M. CANADIAN PACIFIC RAILWAY to (122 M.) *Owen Sound* in 4-5 hrs. (fare \$3.65; parlor car 50 c); STEAMER thence to (555 M.) *Fort William* in 45 hrs. (fare \$17.50, incl. meals and stateroom; through-fare from Toronto to Fort William \$21.15, from Montreal \$28.45)

This forms part of the so-called 'Lake Route' of the Canadian Pacific Railway; and tickets from Eastern points to Fort William or points farther to the W. are available either by this route or by railway (R. 43). Travellers who are not pressed for time are strongly advised to prefer the 'Lake Route', as they miss comparatively little of interest on the railway between Montreal and Fort William and gain an opportunity to see something of the scenery of the Great Lakes, the Sault-Ste-Marie Canal, etc. The C. P. R. steamers, leaving Owen Sound on Tues., Thurs., & Sat., are among the finest vessels for inland navigation in the world, affording excellent accommodation, service, and cuisine. The season of navigation lasts from about May 1st to Oct. 1st; and in summer the water of the lakes is generally smooth — In compliance with the laws of Ontario, no wines or spirits are sold on the steamers.

Toronto, see p. 190. The train (boat-express at 1.50 p.m.) passes (2 M.) *Parkdale* (p. 205) and (5 M.) *Toronto Junction* (p. 205) and runs towards the N.W. At (9 M.) *Weston* (430 ft.) the G. T. R. line to Port Huron diverges to the left (R. 42a), and at (35 M.) *Cardwell Junction* we intersect the G. T. R. line from Hamilton to Allandale (p. 210). We now traverse the district of the *Caledon Mts.*, a low range running N. and S. 46 M. *Melville Junction*. — 49 M. *Orangeville* (1395 ft.; *Queen's*, \$1½; *Rail. Restaurant*), a town of (1901) 2511 inhab., with mills, factories, and a grain and timber trade, is the junction of branch-lines to (73 M.) *Wingham* (2392 inhab.; U. S. Agent), *Teeswater* (74 M.), *Elora* (34 M.), etc.

Elora (*Commercial Hotel*, \$1½), a village with (1901) 1187 inhab., lies on the *Grand River*, which here cuts its way through a picturesque limestone ravine, with walls 100 ft. high. *Elora* contains a small *Museum* illustrating the natural history and geology of the district. This was the land of the *Atiwardaronk* or *Neutral Indians*, interposed between the Hurons and the Iroquois.

Beyond Orangeville the train crosses a fertile and well-tilled plateau (1600-1700 ft. above the sea). Numerous lakes are passed, often affording good trout-fishing. At (76 M.) *Dundalk* (1700 ft.) we reach the highest point of the line and begin to descend. Near (87 M.) *Flesherton* (1557 ft.) are the **Eugenia Falls*. 93 M. *Markdale* (1357 ft.), 109 M. *Chatsworth* (944 ft.). Beyond (115 M.) *Rockford* (913 ft.) we come in sight of Georgian Bay, to which we descend rapidly.

122 M. *Owen Sound* (586 ft.; *Patterson Ho.*, \$2-2½; *King's Royal*, \$2-3; *Seldon's*, \$2-2½; *Queen's*, \$1-1½; *Rail. Restaurant*; U. S. Agent), a rising little lake-port with (1901) 7497 inhab. and a

well-sheltered harbour, lies at the mouth of the *Sydenham River*, at the head of *Owen Sound*, an inlet on the S. shore of *Georgian Bay*. It enjoys some reputation as a summer-resort owing to its pretty scenery (*Ingalls* and other waterfalls, etc.) and its facilities for boating, bathing, fishing, and shooting. Good quarries and brick-fields occur, and various industries are successfully carried on. Among the principal buildings are the *High School*, the *Town Hall*, and the *Court House*.

FROM OWEN SOUND TO SAULT-STE-MARIE BY THE NORTH CHANNEL, 485 M. Steamers of the *Northern Navigation Co.*, starting from *Collingwood* (p. 198) on Tues., Thurs., & Sat., leave Owen Sound about 11 p.m., on the arrival of the evening-express from Toronto, and run to the N. through *Georgian Bay* and the 'North Channel' (between the mainland and *Manitoulin Island*), calling at many points on the N. shore of Lake Huron. The voyage takes about 2½ days, and ample time is generally allowed for landing at the various ports. The steamers and their accommodation are good, and the trip is healthful and enjoyable in summer (fare \$ 10, return-fare \$ 18). — The Tues. boat runs due N. thorough *Georgian Bay* (p. 198), while the others run via *Parry Sound* and the N. Shore ports (comp. pp. 198, 204). The other points called at are *Killarney* (196 M. from Collingwood; Hotel, \$ 1½-2), at the foot of the *La Cloche Mts.* (755-1150 ft.), on the N. shore of *Georgian Bay*, at the beginning of the *North Channel*; *Manitowaning* (226 M.; The Manitou, \$ 1-1½), nearly opposite, on *Grand Manitoulin Island* (p. 221), where Indian souvenirs, etc., may be purchased (good trout-fishing); *Little Current* (246 M.; Queen's Hotel, \$ 1½-2; Mansion Ho., \$ 1-1½), on *Manitoulin*; *Gore Bay* (294 M.; Ocean, Queen's, \$ 1½-2), also on the island; *Spanish River* (314 M.), on the mainland (see p. 233); *Serpent River* (341 M.); *Algoma Mills* (p. 233, 349 M.), *Blind River* (357 M.). *Thessalon* (p. 233; 413 M.); *Bruce* (p. 233; 425 M.); and *Hiawatha Camp*. The steamer calls at the Canadian town of *Sault-Ste-Marie* before crossing to its terminus on the American side (p. 224). In July and Aug. the steamers go on from the Soo to *Mackinac* (p. 224, fare \$ 1½; round trip, in 6 days, \$25).

Steamers of the same company ply from *Collingwood*, *Penetang* (p. 198), and *Midland* (p. 199), through the 'Inside Channel', to *Parry Sound*, *French River*, *Byng Inlet*, *Killarney*, etc. (comp. pp. 198-200).

Lake Huron (580 ft. above the sea), across the waters of which the next part of our route leads (steamers, see p. 222), is 250 M. long and 50-200 M. wide, with an area of 23,800 sq. M. Its greatest depth is 1700 ft. The *Saugeen Peninsula*, jutting out from the S., and the *Grand Manitoulin Island*, on the N., approach within 20 M. of each other and divide the lake into two portions, of which that to the E. is known as *Georgian Bay* (130 M. long and 50 M. wide). The W. shore of Lake Huron is low and little varied in outline (with the exception of the deep *Saginaw Bay*), but the N. and E. coasts are rocky and indented, often showing bold limestone cliffs. The lake contains an enormous number of islands (estimated as high as 36,000), especially along the E. shore of *Georgian Bay* (*Parry Archipelago*) and in the 'North Channel', between *Manitoulin* and the mainland. The E. and N. shores of the lake belong to Canada, the W. to Michigan. The name Huron (from *hure*, 'wild boar') was applied by the French to the *Wyandotte* Indians on account of their manner of dressing their hair. 'Huronian', as applied to a series of primary or crystalline rocks, was originally used to describe the beds of this series overlying the *Laurentian* formations on the N. shore of Lakes Huron and Superior.

On leaving Owen Sound, the C. P. R. steamer runs along the W. side of Georgian Bay (p 223), steering a little to the W. of N. To the left lies the *Saugeen Peninsula*, jutting out into the lake for about 50 M. and forming geologically the termination of the so-called '*Niagara Escarpment*', running from Niagara Falls to Cape Hurd. When clear of the peninsula, the steamer turns to the left (W.) and enters Lake Huron proper by the channel mentioned above, between *Cape Hurd*, the extremity of the Saugeen Peninsula, on the left, and the Grand Manitoulin on the right.†

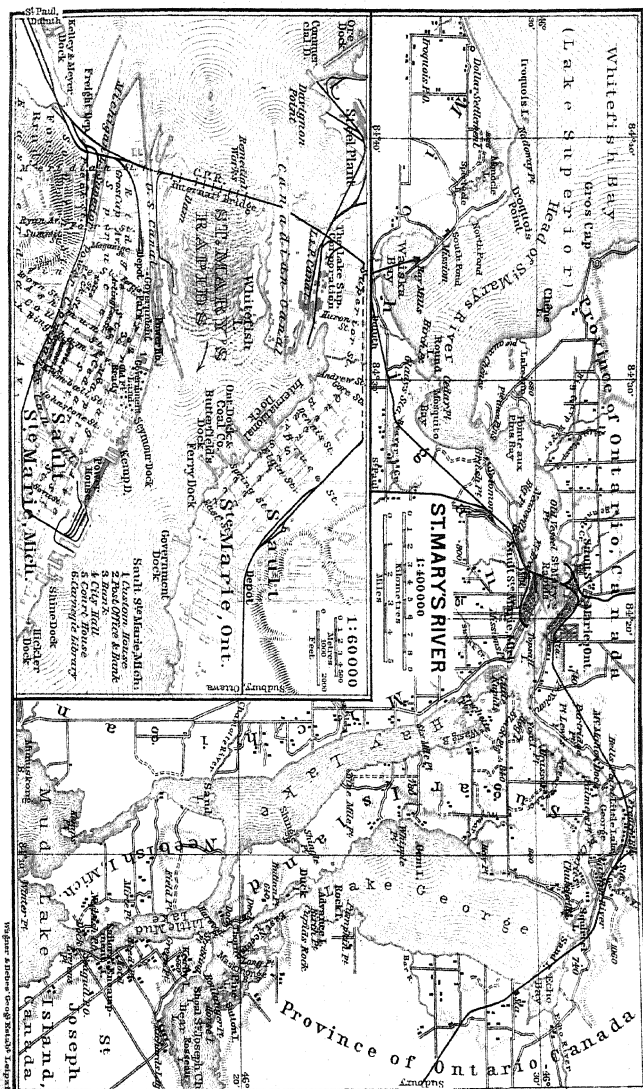
The **Grand Manitoulin Island**, which lies to the N. of our course as we cross Lake Huron, is 80 M. long and 30 M. wide across its widest part. It is inhabited by a number of Ojibwa Indians, and along its N. coast are several villages frequented as summer-resorts (comp. p. 223). Our steamer passes it in the night, and we consequently see little of it.

Early next morning the steamer threads the narrow *Detour Passage*, between Michigan on the left and *Drummond Island* on the right, and enters the beautiful **St. Mary's River* (65 M.), connecting Lake Huron with Lake Superior. Farther on *St. Joseph Island* lies to the right, with first the mainland and then *Encampment Island* to the left. We next pass the rapids between *Sugar Island* (l.) and the mainland (r.), traverse the expansion of the river called *Bear Lake* or *Lake George* (9 M. long and 3-4 M. wide), and finally turn to the left (W.) round the N. end of Sugar Island and enter the Sault-Ste-Marie Canal, by which we avoid the *St. Mary Rapids* (r.).

397 M. (275 M. from Owen Sound) **Sault-Ste-Marie** (615 ft.; *Iroquois*, \$3-5; *Park*, \$3-5; *Manitou*, \$2; *Rail. Restaurant*), a thriving little city with (1900) 10,533 inhab., originated in a French mission established here in 1641. Its position on the Soo Canal and at the convergence of several railways gives it considerable commercial importance. Among the chief buildings are the *Custom House* (Pl. 1), the *Post Office* (Pl. 2), the *City Hall* (Pl. 4), the *Carnegie Library* (Pl. 6), and the *Court House* (Pl. 5). To the W. lies *Fort Brady*, a U. S. military post (comp. Plan). Frequent steam-ferries cross to the Canadian **Sault-Ste-Marie** (*International Hotel*, \$2-3; *Algonquin*, from \$2, well spoken of; *Cornwall*, *Leland*, \$1½; *U. S. Com. Agent*), a town with (1901) 7169 inhab., a huge pulp-mill, chemical works, a Bessemer steel plant, electric smelters, and large iron-ore docks.

One of the things to 'do' at the Soo is to shoot the *Rapids* in a canoe guided by an Indian, an exciting but reasonably safe experience (enquire at hotels). There is good trout-fishing above the Rapids and in the neighbouring streams, and the Indians catch whitefish with scoop-nets below the Rapids. — The island of *Mackinac* (see p. 223 and *Baedeker's United States*) is easily reached from the Soo — From Sault-Ste-Marie to *Duluth*

† The channel is actually narrowed down to about 5 M. by the islets lying off Cape Hurd and the S. end of Manitoulin.



by railway and by steamer along the S. shore of Lake Superior, see *Baedeker's United States*.

The old *St. Mary's or Soo Ship Canal was constructed by the State of Michigan in 1853-5 and was 1800 yds. long, 100 ft wide, and 12 ft. deep, with two locks, each 350 ft. long. The present canal, constructed by the U S Government, is 2330 yds. long, 108 ft wide at its narrowest part (the movable dam), and 16 ft. deep. Its original lock is 515 ft. long, 80 ft wide, and 39½ ft deep. It has a lift of 18 ft and can hold two large lake-steamers. The total cost of the canal enlargement was \$2,150,000 (430,000 l.). Even this however, proved inadequate for the increasing traffic, and an enormous new lock, on the site of the two old locks of 1855, was opened in 1896, having a length of 800 ft, a breadth of 100 ft., and a depth of 43¼ ft. It can accommodate vessels drawing 20 ft. The cost of this new lock and the accompanying enlargement of the canal was about \$5,000,000 (1,000,000 l.). The lock can be filled or emptied in 7 minutes. — A Ship Canal has also been constructed on the Canadian side of the river, to avoid the discriminating tolls levied on vessels bound for Canadian ports. This canal, which was completed in 1895, is about 2½ M. long and includes a lock 900 ft. long and 60 ft wide, with 20 ft. of water on the sill. Its total cost was about \$3,750,000. A second Canadian canal has been projected to be 1400 ft. long and 80 ft wide.

The annual tonnage of the vessels passing through the Soo Canals is about twice as great as that passing through the Suez Canal. In 1905 the canals were passed by 21,679 vessels, with an aggregate tonnage of 36,617,699 tons (Suez Canal in the same year, 4115 vessels of 18,308,498 tons gross, 13,182,694 tons net). The proportion of the freight tonnage carried by Canadian vessels is about 15 per cent. The traffic of 1906 was considerably greater than that of 1905.

The passage of the locks at Sault-Ste-Marie takes fully an hour which passengers may spend in visiting the town. In emerging from the canal we pass under the fine railway-bridge of the C. P. R. line from Sudbury to Sault-Ste-Marie (see p 233) and a movable dam forming a road-bridge. A little farther on, between *Point Iroquois* to the left (U. S.) and *Gros Gap* to the right (Canada), we leave the St. Mary's River and enter *Whitefish Bay*, forming the S.E. end of Lake Superior.

Lake Superior (600 ft. above the sea), the highest of the Great Lakes, is the largest body of fresh water on the globe, being 380 M. long and 160 M. in extreme width, with an area of 31,500 sq. M. The mean depth is about 900 ft. The lake receives the waters of 200 streams and contains numerous islands, chiefly near its E. and W. ends. Its coast-line (ca. 1500 M.) is irregular and generally rock-bound, some of its cliffs and hills being very picturesque. The water is singularly clear and bitterly cold even at midsummer. Lake Superior whitefish (*Coregonus clupeaformis*) are excellent eating, and the traveller should not miss the opportunity to taste them furnished by the steamer's bill-of-fare. Other varieties of fish are also abundant.

Whitefish Point, to the left, with its lighthouse, marks the end of Whitefish Bay and the beginning of the lake proper, across which we now hold a N.W. course for over 200 M., soon passing out of sight of land. The first land we come in sight of next morning is *Isle Royale*, a rugged, rock-bound island, 50 M. long, lying near the N.W.

shore of the lake. It is supposed to contain vast deposits of copper, and is called at weekly by a steamer from Duluth. Our course bends to the left (W.) and passes between this island and the mainland. To the right rises the fine promontory of ***Thunder Cape**, a huge volcanic mass rising 1300 ft. above the lake. Near its foot is the tiny *Silver Islet*, which yielded between three and four million dollars worth of the precious metal before being drowned out by the waters of the lake. Passing Thunder Point, we enter **Thunder Bay**, the mouth of which, to the S. (I.), is closed by *Pie Island*. The steamer generally calls at *Port Arthur* (p. 236), if the state of the water allows, before entering the *Kaministiquia River* and reaching its terminus at —

555 M. (280 M. from Sault-Ste-Marie) **Fort William** (see p. 236), where we join the C. P. R. for Manitoba, the N.W. Territories, and British Columbia.

The N. shore of Lake Superior, of which we see so little from the steamer, is very picturesque at places but is not accessible except by small boat. Almost the only settlement on it between Sault-Ste-Marie and Nipigon is *Michipicoten*, a post of the Hudson Bay Co. Deposits of gold-bearing ore have been discovered at *Lake Wawa*, about 5 M. from the *Michipicoten River*. *Michipicoten Island* lies about 35 M. farther to the W. Comp. also p. 234.

Steamers ply regularly from Fort William to *Duluth* (see *Baedeker's United States*), skirting the N.W. coast of Lake Superior.

47. From Toronto to Montreal by Steamer.

The St. Lawrence River and the Thousand Islands.

389 M. MAIL STEAMER of the *Richelieu & Ontario Navigation Co.* daily, leaving Toronto at 3 p.m. and reaching Montreal at 6.30 p.m. on the following day (fare \$10, meals extra). This is the line described in the text. — Another steamer of the same company, starting from *Hamilton* (p. 209) at 4.30 a.m. on Tues., Thurs., & Sat., leaves Toronto at 4.30 p.m. and reaches Montreal at 12.30 p.m. on Thurs., Sat., & Mon. (fare \$8.75, from Toronto \$8; meals extra). This steamer skirts the N. shore of Lake Ontario to Kingston (p. 227), calling at *Port Darling* (for *Bowmanville*, p. 189), *Port Hope* (p. 189), *Cobourg* (p. 189), *Brighton*, *Trenton* (p. 189), *Belleville* (p. 189), *Northport*, *Picton* (p. 189), and *Cressy*. Beyond Kingston it follows the Canadian shore to *Brockville* (p. 229), whence its course is practically identical with that described below. — As the sail through Lake Ontario offers no special attraction, many travellers prefer to leave Toronto by the evening train of the G.T.R. (about 9 p.m.) and join the steamer at (178 M.) *Kingston*, which the boat leaves about 6 a.m. (through-fare as above; fare from Kingston to Montreal \$5.25). This, however, involves leaving the sleeping-car at a very early hour (2.20 a.m.). Passengers who make the St. Lawrence trip from American soil may join the steamer at *Charlotte* (p. 227) or at *Clayton* (see p. 228, and comp. *Baedeker's United States*). — In the reverse direction the steamers leave Montreal at 2.15 p.m. and Kingston at 5 p.m., reaching Toronto at 6.30 a.m. Passengers may, however, take the G.T.R. train at 9 a.m. on the following morning, overtaking the steamer at *Prescott* (p. 229; 11.20 a.m.), before the Thousand Islands are reached.

Leaving *Toronto* (p. 190), the mail steamer steers to the S.E. across *Lake Ontario* (p. 208) and makes its first stop at —

95 M. (11 p.m.) *Charlotte* (European Ho., Latta Ho., \$2), a small lake-port in the State of New York, connected by a short railway with (7 M.) *Rochester* (see *Baedeker's United States*).

The steamer now heads to the N.W. and crosses the lake to — 185 M. (6 a.m.) *Kingston* (275 ft., **British American*, \$2-4; *Randolph*, \$2, *Iroquois*, \$1-2, *Anglo-American*, \$1-1½; U. S. Consul, Mr *H. D. Van Sant*), the 'Limestone City', a prosperous place with (1901) 17,061 inhab., finely situated on the *Cataraqui River*, at the point where the *St. Lawrence* leaves Lake Ontario, and making a brave and imposing show with its grey stone batteries and Martello towers. It contains locomotive-works and other factories, and much of the produce brought down from the Upper Lakes is here transhipped to barges for carriage to Montreal. It is also the outlet for the traffic of the *Rideau Canal* (p. 183).

Kingston plays a rôle of some importance in the history of Canada. Count de Frontenac, Governor of Canada, established *Fort Frontenac* at this point in 1683 and intrusted it to the care of the Chevalier de la Salle, who here built the first vessel to navigate Lake Ontario (p. 208). The settlement was soon afterwards destroyed by the Iroquois, but was restored by Frontenac in 1695, since which time it has been the key of the Upper St. Lawrence. The name Kingston was given to it by United Empire Loyalists after the American Revolution. During the war of 1812 Kingston was the rendezvous and arsenal of the naval force on Lake Ontario. From 1841 to 1844 it was the seat of the Canadian Government.

A small steamer plies regularly from Kingston to (15 M.) *Cape Vincent* in New York State (see *Baedeker's United States*) — Steamer Route to *Ottawa*, see p. 183.

Kingston is the seat of the UNIVERSITY OF QUEEN'S COLLEGE, one of the leading universities of Canada, attended by about 1000 students, some of whom are women. — Here is also the ROYAL MILITARY COLLEGE, the 'Woolwich Academy' of Canada, with 80 cadets. — *Fort Henry*, begun in 1812, is the strongest in the Dominion after those of Quebec and Halifax, but could offer no effective resistance to modern ordnance. It is not garrisoned. — The *Tête du Pont Barracks* contain a battery of artillery. — Among the other large buildings are the *Provincial Penitentiary*, the *Lunatic Asylum*, the *City Hall*, the *Court House*, and the *Post Office*. At the main entrance of the *City Park* is a bronze *Statue of Sir J. A. Macdonald*, by Wade (a replica of that at Montreal, p. 133).

The *St. Lawrence River*, which we have now reached, has a length, measured from its farthest source to the E. end of the island of Anticosti (p. 3), of 2100 M. and drains an area of 530,000 sq. M. Its upper portions are, however, known as the *St. Louis*, the *St. Mary's* (p. 224), the *St. Clair* or *Detroit* (p. 206), and the *Niagara* (p. 216); and the name usually attaches only to the stream as finally issuing from Lake Ontario and draining the Great Lakes, which between that lake and the *Pointe de Monte* (p. 4) is about 500 M. long. It pours more fresh water into the ocean than any other river except the Amazon. In its upper course its width is 1-7 M., while below Quebec it expands to 20-30 M. The river is navigable for large ocean-vessels to

Montreal, and for river-steamers (with the aid of canals to avoid the rapids) all the way to the Great Lakes. During 4-5 months all navigation is stopped by ice. 'The whole history of Canada is intimately connected with this great river, by means of which pioneers starting from Quebec or Montreal had overrun a great part of the interior of the continent before the settlers of the Atlantic coast had crossed the Appalachians' (*G. M. Dawson*).

Reference may be made to 'The St. Lawrence Basin and its Border Lands', by *S. E. Dawson* (London, 1905), and to 'The St. Lawrence River', by *G. W. Browne* (1905).

On leaving Kingston our steamer almost at once begins to traverse the expansion of the St. Lawrence known as the ***Lake of the Thousand Islands**, which is 40 M. long and 4-7 M. wide and contains about 1700 islands, big and little. Many of these islands are favourite summer-resorts, with hotels and boarding-houses, while others are private property, with the country-houses of rich Americans and Canadians. The voyage through them is picturesque, and many of the islands are illuminated at night. Our course at first lies between *Wolfe* or *Long Island* (r.) and *Howe Island* (l.).

210 M. (r.; 7.20 a.m.) **Clayton** (*Hubbard*, \$ 2-2½; *Isaak Walton*, \$ 2-2½; *Herald Ho.*, \$ 1½-2), a village and summer-resort with (1900) 1913 inhab., is the terminus of the Rome, Watertown, & Ogdensburg R.R. from (108 M.) *Utica* (comp. *Baedeker's United States*). Opposite is the large *Grindstone Island*, behind which, on the Canadian shore, lies *Gananoque*.

Gananoque (*Gananoque Inn*, \$ 2½-4; *International*, \$ 2), a town with (1901) 3526 inhab., affords pleasant headquarters for those who wish to explore the Thousand Isles at leisure. It is not called at by our boat, but a smaller steamer makes regular trips among the islands. — *Gordon Island*, a little below Gananoque, has been transformed into a public park.

213 M. (r.) *Round Island*, with the large *Hotel Frontenac* (\$ 5).

216 M. (l.) **Thousand Islands Park** (*Columbian*, \$ 3-4; *Murray Hill*, \$ 3-4; *Grand View Park*, \$ 2-2½; *New Wellesley*, \$ 2-2½), a great Methodist resort, at the W. end of *Wellesley Island*.

226 M. (r.; 8 a.m.) **Alexandria Bay** (*Crossmon*, \$ 4-5; *Thousand Isle Ho.*, \$ 4-5; *Edgewood*, \$ 2½-4; *Marsden Ho.*, \$ 2½-3½), the chief resort among the Thousand Islands, lies on the American shore, opposite *Wellesley Island*, and counts pretty scenery and good boating and fishing among its attractions. Among the most prominent villas on the neighbouring islets are those of the late *George M. Pullman* (d. 1897) and *H. H. Warner* (of the 'Safe Cure'). — *Westminster Park* (*Hotel Westminster*, \$ 2-4) lies at the E. end of *Wellesley Island*, opposite *Alexandria Bay*, and is reached by ferry.

Farther on we pass the *Summerland Islets* (l.) and the long *Grenadier Island* (l.), leave the Lake of the Thousand Isles, and reach the open river, here about 2 M. wide. For some distance now the voyage is monotonous and uninteresting.

251 M. (1.) **Brockville** (*Strathcona*, \$2½-3½, *Revere*, \$2-2½; *St. Lawrence Hall*, \$1½-2; *Grand Central*, \$1½; U. S. Consul, *Mr. E. S. Hotchkiss*), named after Gen. Brock (p. 209), is a Canadian city with (1901) 8940 inhab., numerous manufactures, and good fishing. This port is not invariably called at. See pp. 182, 188.

265 M. (1.) **Prescott** (*Daniels Ho.*, \$2-3; U. S. Consul, *Mr. Martin R. Sackett*), with (1901) 3019 inhabitants. Passengers are here transferred from the lake-steamer to the river-steamer. — Opposite lies —

Ogdensburg (*Seymour Ho.*, \$2-3; *Windsor, Norman*, \$2), a city at the mouth of the *Oswegatchie*, with (1900) 12,633 inhab. and a trade in grain. [The steamer does not call here.] — About 1 M. below Prescott, on the Canadian shore, are the ruins of a stone *Windmill*, in which a body of 'Patriots', under Von Schultz, a Polish exile, maintained themselves for a few days against the Canadian forces in 1837. — To the right, on the American shore, the buildings of the *Point Airy New York State Asylum for the Insane* are conspicuous. — *Chimney Island*, 4 M. farther on, has the remains of a French fortification.

About 9 M. below Ogdensburg we pass through the *Gallops* or *Galoups Rapids*, 7½ M. long, which are followed, 4½ M. lower, by the *Rapide Plat*. Neither of these is very noticeable, though each is avoided by a canal (Canadian side) in going upstream. Between the two rapids we pass the narrowest point in the river (500 ft.). Numerous islands. On the left bank lies *Morrisburg* (*St. Lawrence Hall*, \$1½).

About 35 M. beyond Prescott we enter the ***Long Sault Rapids**, between the Canadian shore and *Long Sault Island*. The rapids are 9 M. long and are tumultuous enough to give a slight suggestion of danger to the process of 'shooting' them. They are avoided in ascending by the *Cornwall Canal*, 11½ M. long. Part of the water of these rapids is to be deflected into a great power-canal.

314 M. (1.; 1 p.m.) **Cornwall** (*Rossmore Ho.*, *Balmoral, Duquette*, \$1½-2; U. S. Agent), a manufacturing town of (1901) 6704 inhab., at the foot of the Long Sault Rapids, is a station on the New York & Ottawa Railway, which crosses the St. Lawrence here (comp. p. 182). The Cornwall Lacrosse Club is one of the best in Canada. — The boundary between the United States and Canada bends away from the river here, and the Indian village of *St. Regis*, almost opposite Cornwall, is in the *Province of Quebec*. The *Adirondack Mts.* (p. 13) are now visible to the right.

The steamer now steers across the river to *Stanley Island* (*Algonquin Hotel*), near the American shore. — Below this point we traverse the expansion of the river named *Lake St Francis*, 28 M. long and 5-7 M. wide. Both banks are now in Quebec.

At (346 M.) *Coteau Landing* the river is crossed by the fine iron bridge of the Grand Trunk Railway. Opposite Coteau is *Valley-*

field (p. 16). [Stanley Island and Coteau Landing may be omitted if the steamer is late.] We now enter a series of rapids which follow each other at short intervals, with a combined length of about 11 M.: *Coteau Rapid*, *Cedar Rapid*, *Split Rock Rapid*, and the **Cascades*. These are avoided, in going upstream, by the *Soulanges Canal*, 14 M. long, with four locks (lockage 82½ ft.). The large Roman Catholic churches of the villages that line the banks are now very conspicuous.

359 M. *Beauharnois* (1976 inhab. in 1901), at the foot of this series of rapids, lies opposite the mouths of the two westernmost arms of the *Ottawa River*, which here enter the St. Lawrence, enclosing the island of *Perrot* (p. 185). To the left lies *Ste. Anne* (p. 185). Neither of these points is touched at. — The *Lake of St. Louis*, which we now traverse, is 12-15 M. long.

On leaving Lake St. Louis we pass (375 M.) *Lachine* (*Harvey Ho.*, \$1½-2), a pleasant little town with (1901) 5561 inhab., frequented in summer for rowing and sailing. The name seems to have been given to it in 1669 in derision of those of La Salle's men who had deserted and returned to the point on the Island of Montreal, whence, three or four months before, they had set out to find a route to 'China' (comp. Parkman's 'La Salle; and the Discovery of the Great West'). Near the head of the aqueduct stands the house built by La Salle. In 1689 Lachine was captured and destroyed by the Iroquois, who put all the inhabitants to death, many of them at the stake. It is believed that 200 persons lost their lives on this fatal night. Opposite lies *Coughnawaga* (p. 47).

The famed '*Lachine Rapids*, the shortest (3 M.) but most violent of all, form an exciting and dramatic close to our voyage. The rapids begin just below the fine bridge of the *Canadian Pacific Railway* (p. 47). The *Lachine Canal*, for the use of vessels going upstream, is 8½ M. long and has five locks, affording a rise of 45 ft. Soon after leaving the rapids we pass under the **Victoria Jubilee Bridge* (p. 137). To the left lies —

389 M. *Montreal* (p. 125).

18. From Montreal to Port Arthur and Fort William.

995 M. CANADIAN PACIFIC RAILWAY to *Fort William* in 32 hrs. (fares \$ 29.55 \$ 22.40; sleeper \$ 6; tourist-sleeper \$ 3). The tourist-cars are quite comfortable in travelling from W to E., but in the reverse direction they are apt to be filled with emigrants, cooking their own food. The Pullman cars are reserved for holders of first-class tickets.

This line forms part of the great Transcontinental Railway route of the Canadian Pacific Railway, the only railway corporation which crosses the entire American Continent from E. to W., a distance, from *Halifax* (p. 50) to *Vancouver* (p. 284), of 3662 M. (5½ days; fare \$ 92.50, or, for passengers booked through from Europe, \$ 77.50; sleeper \$ 22, tourist-car \$ 11). The distance from Montreal to Vancouver is 2804 M., accomplished in about 4 days (fare \$ 77.75 or \$ 62.40; sleeper \$ 18, tourist-car \$ 9). [London is thus brought within 10-11 days of Vancouver and three weeks of Japan.]

The 'Imperial Limited' leaves Montreal every morning (9.40 a.m.), and the 'Pacific Express' every evening (9.40 p.m.), and sleeping-cars run through to Vancouver without change. In addition to these two daily trains the 'Over Seas Limited' leaves Quebec immediately after the arrival of the C. P. R. steamer and runs through to Vancouver, connecting there with the C. P. R. steamer for Japan and China. Thus passengers can travel under C. P. R. management from Liverpool to Hongkong with only two changes. Holders of through sleeping-car tickets to Vancouver or Mission Junction (p. 234) from any point to the E. of Winnipeg will be furnished, on application to the porter, with checks for 'stopover' at Winnipeg, Banff, Laggan, Field, Glacier, Revelstoke, Sicamous Junction, or North Bend. Good meals are provided on dining-cars (D. \$ 1, B. & L. a la carte). In excellency of rolling-stock and road-bed, in punctuality of service, in the comfort of its sleeping-cars, and in the courtesy of its employees, the C. P. R. stands very high among American railways.

Travellers for pleasure, who have plenty of time at their disposal, are advised to go from Montreal to Winnipeg via Ottawa, Toronto, and the steamer-route described in R. 46, as there is comparatively little of interest on the direct railway journey. C. P. R. tickets from Montreal to Winnipeg and all points to the W. of it are available by either route. From Winnipeg to Banff the railway runs through a prairie-region of wheat-fields and cattle-ranches (comp. p. 251); while the last 600 M., from Banff to Vancouver, display a grandeur and variety of scenery such as is seen, on so ample a scale, on no other railway in the world (comp. R.R. 52, 55).

The 'Annotated Time Table' of the C. P. R., supplied gratis to passengers on application (interleaved, if preferred), is the handiest and most practical publication of the kind known to the Editor.

For the C. P. R. steamship line to *Japan*, see p. 235.

From *Montreal* (Windsor St. Station) to (112 M.) *Ottawa*, see R. 34 a. The train then runs at first towards the S.W., soon leaving the *Ottawa*, with its log-legions. At (144 M.) *Carleton Junction* (Station Hotel, with restaurant, \$ 1½), on the *Mississippi River*, our line turns to the right (N.W.), while the line to *Brockville* (see p. 182) diverges to the left (S.E.). The town of *Carleton Place* has large saw-mills and railway-workshops. Pop. (1901) 4059. *Lake Mississippi*, 2½ M. to the S.W., contains bass and pike. — 151 M. *Almonte*, with thriving woollen-mills and (1901) 3023 inhab.; 160 M. *Pakenham*. At (168 M.) *Arnprior* we connect with the Grand Trunk Railway (see p. 203).

For the next 150 M. we follow the S. (right) bank of the *Ottawa*, which forms the boundary between Quebec (N. bank) and Ontario all the way from *Lake Timiskaming* (p. 239) to a point near its mouth. This part of the valley is inhabited by Highland, English, and German settlers, who gain a livelihood by farming and the timber-industry. Good fishing, for maskinonge, trout, and bass, is afforded by the *Ottawa* itself and by its tributaries. 173 M. *Sand Point*, a summer-resort. — 186 M. *Renfrew* (3153 inhab. in 1901), the junction of lines to (23 M.) *Eganville* and to *Sharbot Lake* (p. 187) and (104 M.) *Kingston* (p. 227), is also a station on the Parry Sound Railway (p. 203). A large creamery at Renfrew produces about 2000 lbs. of butter per day. We now cut off a bend of the river, enclosing the little *Musk Rat Lakes* between it and the railway.

221 M. *Pembroke* (*Copeland House*, \$ 2-2½), an industrious little town of (1901) 5156 inhab., with saw-mills and factories, is the chief

place in the upper Ottawa Valley. It lies on the expansion of the river called *Allumette Lake*, opposite the *Isle des Allumettes*. A little lower down are *Lake Coulonge*, with *Fort Coulonge* on its N. bank, *Calumet Island*, and the '*Calumet Falls*.'

Samuel de Champlain, the 'Father of New France', succeeded in ascending the Ottawa Valley as far as the *Isle des Allumettes* in 1613. Here he discovered that his guide Vignau was an impostor, who had never been farther up the river than this point. The Algonquin (Ottawa) Indians whom he found here were friendly, but he was unable to secure their help in pushing his way westwards to *Lake Nipissing* (p. 233). Comp. *Parلمان's* '*Pioneers of France*'

The river is navigable for some distance above and below Pembroke, which is an excellent centre for trout-fishers. The scenery of the '*Narrows*', at the head of Lake Allumette, and of the so-called '*Deep River*', higher up, is very fine.

Beyond Pembroke the valley contracts and hills rise on either side. The district is still very thinly settled. The railway cuttings for many miles to the W. of this point show excellent sections of the Laurentian formations. The rocks shown 'are for the most part highly characteristic red, gray, and dark-banded gneisses; felspathic and hornblendic, and frequently garnetiferous and micaceous. There are also some large bands of gray and white crystalline limestone' (*Selwyn*). — 243 M. *Chalk River* (Rail. Restaurant), a railway divisional station; 252 M. *Bass Lake*; 271 M. *Rockcliffe*. 281 M. *Bissett* and (294 M.) *Deux Rivières* (Western Hotel) are excellent points for trout-fishing. The latter is 10 M. from the N.E. corner of *Algonquin Park* (p. 204). Picturesque scenery.

315 M. *Mattawa* (565 ft.; *Mattawa Hotel*, \$ 1), a town with (1901) 1400 inhab., at the confluence of the Ottawa and the *Mattawa*, was formerly a fur-trading post of the Hudson Bay Co. and is now a distributing point for a large lumbering-district and a favourite resort of sportsmen and anglers (comp. p. lvi). The name is an Indian word, meaning 'The Forks'.

Guides, canoes, fishing-tackle, ammunition, and supplies may be obtained here by those who wish to shoot or fish in the vicinity. The game includes black bear, deer, wolves, lynx, wild-cat, wolverine, and wood-grouse. Moose and caribou also occur. Excellent fishing for bass and trout may be obtained in the *Mattawa River* and the innumerable other small streams and lakes in which the district abounds. Comp. the pamphlet on 'Fishing and Shooting' issued gratuitously by the C.P.R.

FROM MATTAWA TO TIMISKAMING, 39 M., railway in 2½ hrs (fare \$ 1 55). This railway runs to the foot (S. end) of *Lake Timiskaming* (p. 239), and the scenery along the route is very picturesque. — From (37 M.) *Kipawa Junction* a branch-line runs to (9 M.) *Kipawa*, on the lake of that name — 39 M. *Timiskaming*, and steamers thence to points on the lake, see p. 239.

The nearest point of *Algonquin Park* (p. 204) is about 12 M. to the S. of *Mattawa*.

Beyond *Mattawa* the train leaves the Ottawa and runs to the W. through a wild district of lakes and streams. 341 M. *Bonfield* was the point originally fixed on as the E. terminus of the transcontinental railway, but on the work being transferred from the Government to the Canadian Pacific Co. Montreal was selected instead. 356 M. *Nipissing Junction* (see p. 201).

360 M. North Bay (660 ft.; *Pacific Hotel, Queen's*, from \$ 2, both indifferent, *Rail. Restaurant; U. S. Agent*), a bright little town with (1901) 2530 inhab., lies on the N.E. bank of Lake Nipissing (see below). It is the terminus of the G. T. R. line to the *Muskoka District* and *Toronto* described in R. 43, and of the line to the Temagami Region, described in R. 49. A small steamer plies to various points on Lake Nipissing (see below). Information as to shooting and fishing may be obtained from *Mr. S. A. Huntington*, Fishery Overseer and Game Warden at North Bay.

Lake Nipissing (640 ft. above the sea), 55 M. long and 10-20 M. wide, is very irregular in shape, with numerous promontories and islands. The first white man to see it was the Récollet friar *Le Caron* in 1614, and Champlain reached it on his second Ottawa expedition in the following year. Steamers ply regularly on the lake, and boats for rowing and sailing can be hired. Its waters abound in maskinonge, pike, bass, and pickerel; and good shooting and fishing may be obtained in the surrounding country. North Bay has thus acquired some reputation as a centre for sportsmen. The *Nipissings*, a tribe of Algonquin Indians encountered on this lake, were known by the French as the 'Sorcerers', on account of their reputed intercourse with demons and their skill in the black art.

About 3 M. to the E. of North Bay (good road) lies *Trout Lake* (De-laney's Hotel, \$ 1½-2), 11 M. long and 1 M. wide, the headwater of the Mattawa. It is a favourite resort, well stocked with bass, grey trout, and speckled trout. The lake also possesses a wonderful echo.

Lake Nipissing is drained by the *French River*, which issues from it on the S.W., and flows into Lake Huron after a course of about 55 M. The name commemorates the fact that this was the route by which the early French explorers first reached Lake Huron (see p. 223), being debarred by the hostility of the Indians from crossing Lake Ontario. This route, viâ the Ottawa, Lake Nipissing, and the French River, formed the regular approach to the Upper Lakes for 150 years. The scenery of the French River is highly picturesque.

The train skirts the N. shore of Lake Nipissing, passing a reservation of Nipissing Indians at (375 M.) *Meadowside* and crossing the *Sturgeon* at (384 M.) *Sturgeon Falls*. 409 M. *Hagar*, 428 M. *Wanapitei* (775 ft.); 433 M. *Romford*. — 440 M. Sudbury (850 ft., *Hotel; Rail. Restaurant; U. S. Agent*), with its smelting-works and (1901) 2027 inhab., lies in the midst of rich deposits of nickeliferous pyrrhotite, containing on an average about 2¼ per cent of nickel. The amount of the ore produced in 1904 was 203,388 tons, yielding nickel to the value of \$1,516,747. Copper, cobalt, and platinum are also procured from the ore. Sudbury is the starting-point of a line to Sault-Ste-Marie (see below).

FROM SUDBURY TO SAULT-STE-MARIE, 182 M., in 5½ hrs. (fares \$ 5 50, \$ 4 90; sleeper \$ 1 50). Through-carriages run by this route from E. points to St. Paul, Minneapolis, and Duluth. — Most of the intermediate stations are unimportant. 71 M. *Spanish* is the station for (3 M.) *Spanish River*, a lumbering-port on the N. bank of *Lake Huron*. Our line reaches Lake Huron at (95 M.) *Algoma*, another timber trading place. The long island of *Mantoulin* is seen on the other side of the *North Channel*, 4-6 M. distant (comp. p. 224). 132 M. *Thessalon* (Queen's, \$ 1½; 1205 inhab.); 142 M. *Bruce*, with deserted copper-mines. The *Desbarats Islands*, in Lake Huron, opposite (151 M.) *Desbarats* (Hiawatha, \$ 2; Nokomis Lodge, \$ 1), have become a popular resort. 164 M. *Ekoba* — 179 M. *Sault-Ste-Marie*, Ontario (comp.

p. 224). The train then crosses the *Sault River* and *Canal* by a fine bridge, 1 M. long, and reaches —
182 M. *Sault-Ste-Marie*, Michigan (see p. 224)

Beyond Sudbury our train runs towards the N.W., through a sparsely-peopled forest-clad region, seamed with small rivers and dotted with innumerable lakes. For about 70 M. the rocks passed over belong to the Huronian system. To the right, about 3 M. from Sudbury, is the *Murray Nickel and Copper Mine*. At (458 M.) *Larchwood* (868 ft.) we cross the *Vermilion River*. The oval depressions visible in the surface of the sandstone rock here are locally known as 'Nanabozhoo's Snowshoe Tracks'. As we near (464 M.) *Onaping* (1050 ft.) a glimpse of the high falls (150 ft.) of the *Vermilion River* is obtained to the right. To the left, beyond Onaping, lies *Windy Lake* or *Lake Makoping*. 475 M. *Cartier* (1365 ft.) is a divisional station. Beyond (495 M.) *Pogamasing* (1165 ft.) we cross the *Spanish River*, which here runs between cliffs of red hornblende-granite, 300 ft high. 529 M. *Bisco* lies on a lake of the same name. The line now follows the 'height of land', or watershed, between Hudson Bay and the Great Lakes. At (561 M.) *Woman River* we cross the stream of that name, and beyond (578 M.) *Ridout* the *Apishkaugama*. From (569 M.) *Wakami* canoe-trips are made by the *Mississauga River* to Lake Huron. 612 M. *Chapleau* (Rail. Restaurant), a divisional station, on *Lake Kabequashesing*, to the N. of the watershed; 642 M. *Wayland*, with iron-mines. — At (672 M.) *Missanabie* (1105 ft), where we cross *Dog Lake*, a very short portage connects the streams flowing towards the N. with those descending to Lake Superior.

This was an important point for the fur-trade long before the railway was constructed, the *Michipicoten River*, connecting it with Lake Superior, and the *Moose River*, running N. to James Bay, forming a natural highway between the Great Lakes and Hudson Bay (comp. p. 226). Large quantities of furs are still brought hither from the N. by the *Moose River*. The *Michipicoten* affords good fishing. — Some gold mines are operated a little to the S. of *Missanabie*.

Beyond *Missanabie* the construction of the line was attended with considerable difficulties, overcome by skilful engineering. Numerous rock-cuttings are passed. The extensive yards at (744 M.) *White River* (Rail. Restaurant) are for resting cattle on their way to the E. We then follow the *White River* (left) for some distance, and cross it beyond (760 M.) *Bremner*. To the right lies *Round Lake*. Farther on we cross the *Big Pic River* by a lofty iron bridge and reach (800 M.) *Heron Bay* (708 ft.), at the N.E. corner of *Lake Superior* (see p. 225).

For the next 200 M. the railway follows the N. bank of Lake Superior more or less closely. The scenery is very striking, and the traveller should rise early in order to enjoy it. At many points the line runs on ledges cut out in the side of the fine granite cliffs, which border the shore and often rise to a height of hundreds of feet. Numerous tunnels and bridges are necessary, and the hardness of

these ancient and finely coloured rocks immensely increased the engineering difficulties of this part of the railway. The lake is not always in sight, but numerous views of its vast blue expanse are enjoyed. Innumerable streams flow into its waters from the N., nearly all of them affording good sport to the angler. Trails to these rivers, see p. lii. — 808 M. *Peninsula* (inn), 819 M. *Coldwell*. Farther on we cross the *Little Pic River* and reach (826 M.) *Middleton*. — 844 M. *Jack Fish*, at the mouth of the river of the same name and on a fine sweeping bay, is an excellent fishing-station, both for river-trout and for the whitefish (p. 225), sturgeon, and lake-trout of Lake Superior itself. A little farther on rises *Ogilvie's Butte*, one of the most striking of the numerous basaltic protuberances which interrupt the granite formations of the shore. — At (863 M.) *Schreiber* (Rail. Restaurant) information as to fishing and guides may be obtained from the Divisional Superintendent or the Divisional Engineer. At (877 M.) *Rosspoint* (645 ft.) we reach the beautiful '*Nipigon Bay*, cut off from the main body of the lake by a chain of islands. 894 M. *Gravel* is another good angling-resort.

926 M. *Nipigon* (Taylor's Hotel, \$2) lies at the mouth of the *Nipigon River*, the largest river flowing into Lake Superior and one of the most famous trouting-streams in Canada. Adjacent lies *Red Rock*, a post of the Hudson Bay Co. The railway crosses the river here by a bridge 730 ft. long and 85 ft. high.

The Nipigon issues from Lake Nipigon (see below), to the N. of Lake Superior, and in its course of about 40 M. descends 300 ft. and forms three small lakes. It abounds in speckled trout, which not unfrequently reach a size of 5-8 lbs. One of the favourite resorts of fishermen is *Camp Alexander*, about 12 M. from Nipigon Station, with which it is connected in the fishing-season (June 15th-Sept. 30th) by a steam-launch.

*Lake Nipigon (900 ft. above the sea), measuring about 70 M. by 50 M. in its longest diameters, is very irregular in shape and contains numerous islands. It is well stocked with whitefish and trout and is a veritable paradise for anglers. The scenery is very fine.

Anglers who mean to fish in the Nipigon region are advised to apply beforehand to the Hudson Bay Co.'s Manager at Red Rock and inform him of the size of the party and of what is wanted in the shape of guides, canoes (50 c per day), camp-outfit, and the like. The guides are generally Indians (fee \$2-2½ per day). One canoe and two Indians will suffice for two anglers, and the total expense for each person need not exceed \$4 per day. Black flies and mosquitoes are troublesome, especially in the early part of the season, and protections against their bites are dispensable.

About 3½ M. beyond Nipigon the train rounds the cliff known from its colour as *Red Rock*. To the left we enjoy a good view across the bay, with the islands of *La Grange*, *Isle Verte*, and *St. Ignace*. We then intersect the neck of the promontory jutting out between Nipigon Bay and *Black Bay*, skirt the latter, and strike direct for Port Arthur, crossing the *Black Sturgeon River*. Black Bay is bounded on the W. by the bold *Thunder Cape* (p. 226), sheltering *Thunder Bay*, of which we obtain pleasant glimpses. 944 M. *Wolf*; 959 M. *Pearl*, 977 M. *Mackenzie*

992 M. **Port Arthur** (610 ft ; *Mariaggi*, \$2-7; *Algoma*, \$2-3; *Rail. Restaurant*), a small lake-port, with (1901) 3214 inhab. (now 7500), lies on the W. shore of Thunder Bay in a district rich in gold and silver. It is the lake-terminus of the Canadian Northern Railway, which here possesses the largest grain-elevator in the world, comprising two metal-clad working-houses and two tile storage-annexes, with a total capacity of 7,000,000 bushels. Boating and fishing are obtained in the bay, which, however, is subject to squalls. Steamers run hence to *Duluth* (see *Baedeker's United States*). An electric tramway connects Port Arthur with Fort William (see below).

FROM PORT ARTHUR TO GUNFLINT, 86 M., *Canadian Northern Railway* in 7-8 hrs. This line passes (S M) *Fort William* and runs towards the S.W. 20 M. *Stanley*, the nearest station to the (S M) *Kakabeka Falls* (p. 242). 40 M. *Silver Mountain*; 55 M. *Sand Lake*; 71 M. *North Lake*. — About 6 M. from the present terminus are the *Gunflint Mines* in the *Iron Range*, an important iron-producing district in *Minnesota* (comp. *Baedeker's United States*)

995 M. **Fort William** (607 ft., *Empire*, **Kaministiquia Hotel*, \$2-3; *Avenue*, \$2; *U. S. Agent*), the lake-port of the W. section of the C. P. R. and the terminus of the E. division, lies on the wide and deep *Kaministiquia*, just above its mouth in Lake Superior. Pop. (1901) 3997 (now 7500). This is the point at which passengers who have crossed Lakes Huron and Superior by steamer (see R. 46) rejoin the railway. The wharf is connected with the railway-station by a lofty foot-bridge. Adjacent are several immense *Grain Elevators*. Large quantities of grain from Manitoba and the North-West are shipped here for carriage on the Great Lakes. The picturesque situation of Fort William, in conjunction with its boating, fishing, and shooting facilities, attracts many summer-visitors. Adjacent rises the abrupt *Mackay Mountain* (see below)

A small post was established here by Du Luth towards the close of the 17th century, but was afterwards abandoned. In 1801 it became a port of the Hudson Bay Co., and the old fort is still preserved as an engine-house. The *Kaministiquia* and its connecting waters formed a canoe-route by which the Indians of the North-West brought their furs to the traders. It was by this route that Col. Wolseley transported his forces to Fort Garry in 1870 (see p. 246).

Mackay Mt (see above) affords a fine view of the lake, town, river, and environs. To ascend it we may take the Port Arthur electric car for some distance, then follow the C. P. R. tracks, and ferry across the river, near a big lumber-yard, to the French Mission. A little farther up the river a rough path diverges to the left through wood and ascends over swamps and logs to (2 hrs.) a chapel near the top of the mountain.

Either Port Arthur or Fort William forms good geological headquarters for the exploration of the Nipigon (Cambrian), Animike (copper-bearing Cambrian), and Huronian rocks.

At Fort William we change from Eastern to Central Time (1 hr. slower; comp. p. xii). To the W. of this point the C. P. R. uses the 24-hour system in its time-tables, counting 1 p.m. as 13 o'clock.

49. From North Bay to New Liskeard. Temagami Region.

113 M. TEMISKAMING AND NORTHERN ONTARIO RAILWAY in 4½-6 hrs. (fare \$ 3.40; parlor-car 50 c.). From *Toronto* via North Bay to (340 M.) New Liskeard through-train (G T R.) in 8 hrs (fare \$10 25; sleeper \$3).

This new line, completed in 1903, opens up a district full of attractions for the sportsman and the lover of natural beauty and of great importance for its mineral wealth. The railway belongs to the Government of Ontario, and is being pushed forward to join the new Grand Trunk Pacific Railway (p. 307), while it will ultimately be extended to James Bay (p. 166). This railway was a new experiment in America and owing to the accidental discovery of silver-ore on the right of way itself (see pp. 238, 239), it has already proved very successful. The growth of agricultural settlement in the district to the N. of New Liskeard bids fair to make it a permanent source of income for the province. The line is well built and well ballasted.

To the tourist the chief source of interest in this new district is the Temagami Forest Reserve, a great tract of 5900 sq. M., set aside in 1900 from cultivation and intended to preserve the pristine beauty of the primæval forest which surrounds Lake Temagami, to protect the great game (moose and caribou), and to be a provincial park for Ontario — *Lake Temiskaming* (p. 239) is also very striking

North Bay, see p. 233. Our train runs back on the C. P. R. track along *Lake Nipissing* (see p. 233) to (1 M.) *North Bay Junction*, where the new TEMISKAMING AND NORTHERN ONTARIO RAILWAY diverges to the left (N.). The line ascends rapidly through a bleak and rock-strewn tract, but we enjoy many interesting glimpses of the hundreds of lakes with which the whole region is dotted. The stations are as yet often names only. — 9 M. *Woodland*; 14 M. *Widdifield*; 27 M. *Moose Lake*; 32 M. *Jocko* (on a lake of that name, to the right); 38 M. *Osborne*; 42 M. *Otter*. At (48 M.) *Bushnell* the line enters the *Temagami Reserve* (see above). Near (50 M.) *Boyce* we pass *Boyce Lake* (1.) and a series of smaller lakes. 56 M. *Redwater*, between two lakes; 59 M. *Rabbit Creek*; 64 M. *Doherty*; 65 M. *Roxborough*.

72 M. *Temagami* (Ronnoco Hotel, \$ 2-3) lies at the head of the N.W. arm of *Lake Temagami* or *Tamagami* ('*Deep Water*'; 880 ft. above the sea), a large sheet of water, containing 1200 islands and said to possess, with its ramifying arms, no less than 3000 M. of coast-line. The scenery resembles that of the Muskoka Region (p. 201), but is on a bolder and more striking scale, while the cottages with which the Muskoka Lakes are lined are almost wholly lacking. The government of Ontario does not sell the islands but leases them at \$10 per acre. The banks are clad with thick woods, patrolled and protected by numerous rangers. Guides (\$ 3-3½ per day, with canoe) and equipment for fishing and shooting may be obtained at Temagami. Moose and caribou abound in the woods, while the lake teems with fish (bass, trout, etc.).

From Temagami a small steamer (fare 75 c., return-fare \$ 1.25) plies in about 2 hrs. to the *Temagami Inn* (\$ 2½, \$ 16-21 a week), picturesquely situated on *Temagami Island*. Soon after leaving the Ronnoco wharf, we pass Mt. Caribou on the left and then steer through a rather narrow channel, which presently

widens out into a lake-like expansion, containing a number of islands and surrounded by well-wooded shores. The contrast between the soft poplars and the white birch on the left and the sombre foliage of the pines on the right is striking. As we advance the shores become bolder and higher. After rounding *Point Matagama* (boarding-house) we pass between *Bear Island* (r., see below) and *Temagami Island* (l.) and reach the dock after another quick turn to the left. The Inn is built of pine-logs in a most picturesque style, with great open log fire-places in the entrance-hall and dining-rooms. From *Temagami Inn* another steamer plies (18 M.; 2 hrs.; fare 75 c., return-fare \$1.25) to the *Lady Evelyn Hotel*, picturesquely situated near the head of *Lake Temagami*. After leaving the inn the boat turns to the right between well-wooded islands and passes (r.) *Bear Island* (Mrs. Turner's Boarding House), with the Rangers' Station and a Half-Breed village, under the protection of a quaint Roman Catholic church, with a curious belfry. As we advance the E. shore (r.) rises into high rocky cliffs. After passing through the narrows and leaving *Granmes Bay* on the left, we approach *Devil's Mt.* (1680 ft.; r.), the highest point on the lake. The boat stops at *Kewadin Camp* (for boys; Mr. Gregg Clarke), on *Devil's Island*, and then passes the mouth of *Sandy Inlet* (r., 6 M.), whence a short portage leads to *Ko-Ko-Lake*. A little farther on we reach the *Lady Evelyn Hotel* (\$2-3), a bark-covered building on *Deer Island* facing the E. and backed by beautiful groves of birch and poplar. [It takes its name from the fact that it lies near the beginning of the canoe and portage route, via *Diamond Lake* and the *Lady Evelyn Falls*, to *Lady Evelyn Lake*, another beautiful sheet of water, with excellent scenery, named after a daughter of the Marquis of Lansdowne, formerly Governor-General of Canada.] The rocks in front of the hotel are carpeted with trailing arbutus. — Good deer-shooting and fishing (small-mouthed black bass, speckled trout, lake-trout, pike, and doré) are obtained near the hotel, and the canoeist may make it the starting-point for many interesting expeditions in all directions.

While the lake is exceedingly deep in places, the navigation is by no means easy for the steamers which ply on the lake, as frequent reefs ('battes') run out from the islands and there are many shoals. — In the S. arm is *Camp Temagami*, an excellent summer-camp for boys, managed by Mr. Creighton of Upper Canada College (p. 197).

Beyond *Temagami* the train passes through a clearing 400 feet wide, which is intended to lessen the danger of forest-fires and extends along the line for many miles. We cross (74 M.) *Net Lake*, pass several other small lakes, and skirt the shores of *Rib Lake* (r.; 1017 ft.) for about 6 M., enjoying another succession of picturesque scenes. 84 M. *Rib Lake Station*; 90 M. *Johnson*. We have now left the Forest Reserve and entered upon the mining-district (see below), in which we make our first stop at (94 M.) *Latchford*, on *Bay Lake* (l.), where the Edison Co. has a mine. Boats meet the trains here for points on the *Montreal River*. The railway is here traversing the so-called '*Gillies Limit*', a wooded tract, the mineral deposits on which have been reserved by the Ontario Government and are to be developed at the expense of the Province, under the supervision of Professor W. G. Miller, Provincial Geologist. Beyond *Latchford* the railway skirts the *Montreal River* (views to the right), passing (99 M.) *Gillies* and (100 M.) *Cassidy*.

103 M. *Cobalt* (1000 ft.; *Prospect Hotel*, *Cobalt Ho.*, \$2½-3), the centre of the mining boom, with about 2000 inhab., is situated on the side of a steep rocky hill, rising from a small lake of the same name (r.). It is most interesting as a specimen of a modern

mining-camp, reproducing the conditions described by Bret Harte and Artemus Ward, but without the lawless element. The fact that no liquor-licenses have been granted has helped to prevent disorder. There is a large and picturesque floating population drawn from all parts of America and from every class in the community. The houses are chiefly of unpainted wood. The sanitary arrangements are so unsatisfactory that many of the citizens prefer to live at Haileybury (see below).

Cobalt was named by Professor Miller from the plentiful deposit of cobalt found in the district. This ore is associated with silver and with the so-called 'kupfer-nickel' ore. The silver is also associated with smaltite, and arsenic is so abundant that the water is popularly supposed to be poisonous. As a rule the finds occur in fissures of the rock, which in some cases have been followed over 200 ft. below the surface. Since the latter part of 1904 ore has been shipped from Cobalt to the value of \$2,250,000. Among the principal mines are the *La Rose* (seen to the right, beyond the lake), the workings of which reach a depth of 800 ft., and the *Trethewey* and *University*, the shafts of which have been sunk about 100 ft. Another 6-inch seam of silver ore was discovered in Aug., 1906, just across the lake from the Cobalt railway-station. The country for miles around bears evidence of the assiduity of the prospector, trenches 5-10 ft. deep being cut in the soil and rock in all directions. The neighbouring camps and towns are connected with Cobalt by telephone-lines, the wires of which serve as guides through the otherwise trackless bush.

The large building on the hill (l.) above the station is used as a *Theatre & Mining Exchange*. The *Bank of Commerce*, in Main St., is a neat portable building brought from British Columbia. The reading-room of the *Young Men's Christian Association*, just above the station, on the right, is used also for free lectures by the government mineralogists to prospectors and others interested in the discovery of ores.

Beyond Cobalt the railway passes between hills of conglomerate (l.) and banded slate (r.) and reaches (108 M.) *Haileybury* (Attorney Ho., Vendome, \$2, both reported very fair), well situated on Lake Timiskaming (see below). It has a population of 2000 and has been growing rapidly owing to the mining boom in Cobalt. The business part of the town was, however, burned down in Aug., 1906. The tourist may leave the train here for the lake-steamer (p. 240), or he may go on to —

113 M. *New Liskeard* (*Grand Union Ho.*, \$2; pop. 3000), the present terminus of the railway. At either of these places the traveller will find it better to send his baggage on with the hotel-vehicles and walk down the steep hill to the hotel.

***Lake Timiskaming** or *Temiskaming* (580 ft.) forms a strong contrast to the octopus-like Lake Temagami, consisting of a sheet of water 76 M. long and only 7 M. across at its widest point, while its shores are indented by few bays. It is, in fact, an expansion of the Ottawa River (p. 184), abounding in black bass and surrounded by game-haunted forests. The scenery is sombre, weird, and impressive. Since the early French days, Lake Timiskaming has

formed part of the great water-route to the Hudson Bay territory (comp. p. 234).

The steamers of the NORTH TIMISKAMING NAVIGATION Co., plying to the foot of the lake (73 M.), leave New Liskeard every week-day at 8 a.m. and Haileybury at 9 a.m. The better boat ('Meteor') starts on Mon., Wed., and Frid. (fares to Timiskaming \$2 20, \$1.70; return-fare \$3 70). The steamer passes several islands, and at the narrowest part of the lake we see (1) *Fort Timiskaming*, a post of the Hudson Bay Co. — *Timiskaming* (Bellevue Ho., \$2 1/2), at the extreme S. end of the lake, is a great centre for fishermen. Hence to *Mattawa* by railway, see p. 232.

On Sat. the 'Meteor' leaves New Liskeard for *North Timiskaming*, at the head of the lake, returning at 4 p.m. on Sun., and regaining New Liskeard at 6 p.m.

The wild district between Lake Timiskaming and Hudson Bay, with its forests, lakes, and streams, is becoming better known owing to the influx of settlers and prospectors brought by the new railway and the mining boom. It is also used as a hunting-ground by several sporting clubs of New Yorkers and Pennsylvanians. A good account of the region is given by Mr. William Ogilvie in the Annual Report of the Department of the Interior for 1890. About 75 M. to the N. is *Lake Abitibi*, to the N.W. of which is an as yet nameless lake, 12 M. long, discovered in 1905. Large gold finds are reported from *Lake Opasitika*, a little to the S. of Lake Abitibi.

VII. WESTERN AND NORTH-WESTERN PROVINCES.

Route	Page
50 From Fort William and Port Arthur to Winnipeg . .	242
a Viâ Canadian Pacific Railway	242
Lake of the Woods	243
b Viâ Canadian Northern Railway	244
51. Winnipeg	245
Environs of Winnipeg	249
From Winnipeg to St. Paul	249
From Winnipeg to Selkirk and Winnipeg Beach .	250
Lake Winnipeg	250
From Winnipeg to Teulon	250
From Winnipeg to Souris	250
From Winnipeg to Oak Point	250
52. From Winnipeg to Banff	250
From Portage-la-Prairie to Yorkton	251
From Portage-la-Prairie to Delta. Lake Manitoba	251
From Brandon to Estevan	251
From Brandon to Morris	252
From Brandon to Miniota	252
From Brandon to Lenore	252
North-West Territories of Canada	253
From Regina to Prince Albert	253
From Regina to Arcola	253
From Moose Jaw to North Portal	254
Missouri Coteau	254
From Calgary to Edmonton	257
From Calgary to Macleod	257
Rocky Mountains Park of Canada	259
53. From Winnipeg to Edmonton viâ Canadian Northern	
Railway	262
From Dauphin to Prince Albert	263
From Edmonton to the Arctic Ocean	264
54 From Dunmore Junction to Lethbridge and Kootenay	
Landing	266
From Lethbridge to Sweet Grass (Coumts)	266
From Stirling to Cardston	266
55 From Banff to Vancouver	268
The Lakes in the Clouds	269
Mt. Lefroy. Mt. Victoria. Mt. Temple	269, 270
Excursions from Field	271
Selkirk Range	275
From Sicamous Junction to Okanagan Landing .	280
Cariboo Region	282
From Spence's Bridge to Nicola	282
Fraser River	282
Coast Range	282
New Westminster	284
From Vancouver to Steveston	287
From Vancouver to Seattle	287
56. From Revelstoke to Arrowhead, Robson, and Nelson.	
Kootenay Region	287

Route	Page
a. From Revelstoke to Arrowhead	287
b. From Arrowhead to Robson (West Robson)	287
From Robson to Rossland	288
From Robson (West Robson) to Midway	288
c. From Robson to Nelson	288
From Nelson to Northport and Spokane	289
From Nakusp to Sandon	289
57. From Vancouver to Victoria	289
From Victoria to Nanaimo and Wellington	292
From Victoria to Sidney	292
British Columbia. Vancouver Island	292

50. From Fort William and Port Arthur to Winnipeg.

a. Via Canadian Pacific Railway.

427 M. RAILWAY in 13 $\frac{1}{2}$ -14 $\frac{1}{2}$ hrs. (fare \$ 12 90; sleeper \$ 8; berth in tourist-car \$ 1 $\frac{1}{2}$).

Fort William and Port Arthur, see p. 236. Passing *West Fort William*, the train leaves Lake Superior and enters a desolate rock-strewn region, overgrown with rather scrubby timber. Few settlements or attempts at cultivation are seen, but there is said to be better land at some distance from the railway. Many lakes and rivers are passed. — About 4 M. from (14 M.) *Murillo* (945 ft.) are the fine **Kakabeka Falls*, 120 ft high and 450 ft. wide, formed by the *Kaministiquia*. *Murillo* is also the station for the *Rabbit Mountain* silver-mining district. — Beyond (24 M.) *Kaministiquia* (1010 ft.) we leave the river of that name and ascend along the *Mattawan*. Names such as (34 M.) *Finmark* and (60 M.) *Lanko* (1535 ft) indicate the presence of a Scandinavian element among the scanty settlers. To the left, at (72 M.) *Savanne* (Rail. Restaurant), may be seen some barges abandoned here by Wolseley on his march to Fort Garry (Winnipeg; comp p. 236). Much difficulty was experienced in making this part of the line from the 'muskegs', or morasses covered over with soil and vegetation, that required to be filled in. — 85 M. *Upsala*; 90 M. *Carlstadt*; 113 M. *English*; 131 M. *Bonheur*; 149 M. *Ignace* (1487 ft.; Rail. Restaurant), a divisional point. We now follow the *Wabigoon River*, which, with its chain of lakes, affords good fishing — 199 M. *Wabigoon* (*Wabigoon Hotel*, \$ 1 $\frac{1}{2}$) is the starting-point for the new *Manitou Mining District*, which lies to the S. Small steamers run hence in summer to *Rainy Lake* (p. 244). — At (212 M.) *Dryden* is an experimental farm belonging to the Ontario Government. At (229 M.) *Eagle* are two pretty waterfalls, one on each side of the railway. The whole district is characterized by wild rocky scenery and numerous deep lakes. Beyond (270 M.) *Hawk* the large *Lake of the Woods* (p. 243) lies to the left.

294 M. **Kenora**, formerly called *Rat Portage* (1085 ft.; *Hilliard*, \$2-3; *King Edward*, *Commercial*, \$1½-2, none first-rate; *U S. Agent*), a town with (1901) 5202 inhab., is finely situated on the Lake of the Woods, at the point where its waters pour over a rocky ledge into the *Winnipeg*, forming a picturesque * *Waterfall* 20 ft. high. At present Kenora is mainly a saw and flour milling place and somewhat in the rough; but with the erection of a good hotel and a few other improvements it might be made a charming summer-resort. The recent mining activity in the district (see below) has had considerable effect on the growth of the town, and large reduction-works have been erected. To see the Falls, we follow the railway to the bridge and then turn to the right.

The **Lake of the Woods* is a beautiful sheet of water, 65 M. long and 10-50 M. wide, studded with islands and surrounded by green forests rising at places in hills of considerable size. It was discovered by the French explorers in 1680, and plays a prominent part in the story of the early *voyageurs* and *coureurs de bois*. The 'portage', named from the colonies of musk-rats, connected the lake with the *Winnipeg* River. A steam-ferry plies several times daily from Kenora (round trip 25c.) to *Norman* and *Keewatin* (see below), on the other side of the river. Small steamers and steam-launches make numerous other excursions in summer; and small boats may be hired. The steamer 'Kenora' plies thrice weekly from Kenora to *Boucherville*, whence railway and steamer run to *Fort Frances* (p. 244), near *Rainy Lake*, with which the Lake of the Woods is connected by *Rainy River* (comp. p. 244). Extensive deposits of free milling gold have recently been found near the Lake of the Woods, *Rainy Lake*, and the *Serne River* (an affluent of the latter) and have attracted a considerable number of miners. The annual output of gold is said to reach \$10,000,000. The whole region also abounds in excellent fishing and shooting, full particulars of which may be learned at Kenora. The timber cut by the mills on the Lake of the Woods amounts annually to at least 100,000,000 ft. — An interesting canoe-trip may be made down the *Winnipeg* River to *Lake Winnipeg* (p. 250).

The train crosses the *Winnipeg* by a lofty open-work bridge (falls to the right). 297 M. *Keewatin* (see above), with a large flour-mill (capacity 1800 barrels per day), numerous saw-mills, and the huge works of the *Keewatin Power Co.* Between this point and (304 M.) *Ostersund* we have two good opportunities of noticing the junction of the *Laurentian* and *Huronian* systems.

Beyond (326 M.) *Ingolf* we leave Ontario and enter *Manitoba* (p. 246). 346 M. *Rennie*; 366 M. *Whitemouth*, with lumber-mills. The country becomes more and more level and the trees more sparse, until we fairly leave the forest region of the East and emerge on the great prairies of the West. Beyond (392 M.) *Beauséjour* the underlying rocks are concealed by alluvial deposits. — 406 M. *East Selkirk*, with about 300 inhab., quarries of *Galena* limestone, an immigration-barrack (the old railway round-house), and a huge farm belonging to Sir W. C. Van Horne. Omnibuses from *Selkirk* (p. 250) meet all the trains.

The train now turns to the S., following the *Red River*, which it crosses at (426 M.) *St. Boniface* (p. 249).

427 M. *Winnipeg*, see R. 51.

b. *Viâ Canadian Northern Railway.*

439 M. CANADIAN NORTHERN RAILWAY in 18 hrs. (fares as at p. 242) The Canadian Northern Railway runs to the S. of the Canadian Pacific Railway and more or less parallel with it

Port Arthur and (3 M.) *Fort William*, see p. 236. At (19 M.) *Stanley Junction* the line to *Gunflint* (p. 236) diverges to the left. 45 M. *Mattawin*; 82 M. *Kashabowé*; 143 M. *Atikokan* (Rail. Restaurant), 160 M. *Banning*; 181 M. *Glencorchy*; 200 M. *Mine Centre*. A number of small lakes are seen to the left about this part of the line.

231 M. *Fort Frances*, with (1901) 466 inhab., lies near the S. end of **Rainy Lake**, a picturesque sheet of water about 50 M. in length and connected by the *Rainy River* with the Lake of the Woods (p. 243). A steamer plies hence thrice weekly to *Boucherville* (connecting with *Kenora*, see p. 243), and another steamer plies weekly to (15 M.) *Isherwood*, on the Rainy River. *Fort Frances* was an early post of the Hudson Bay Co

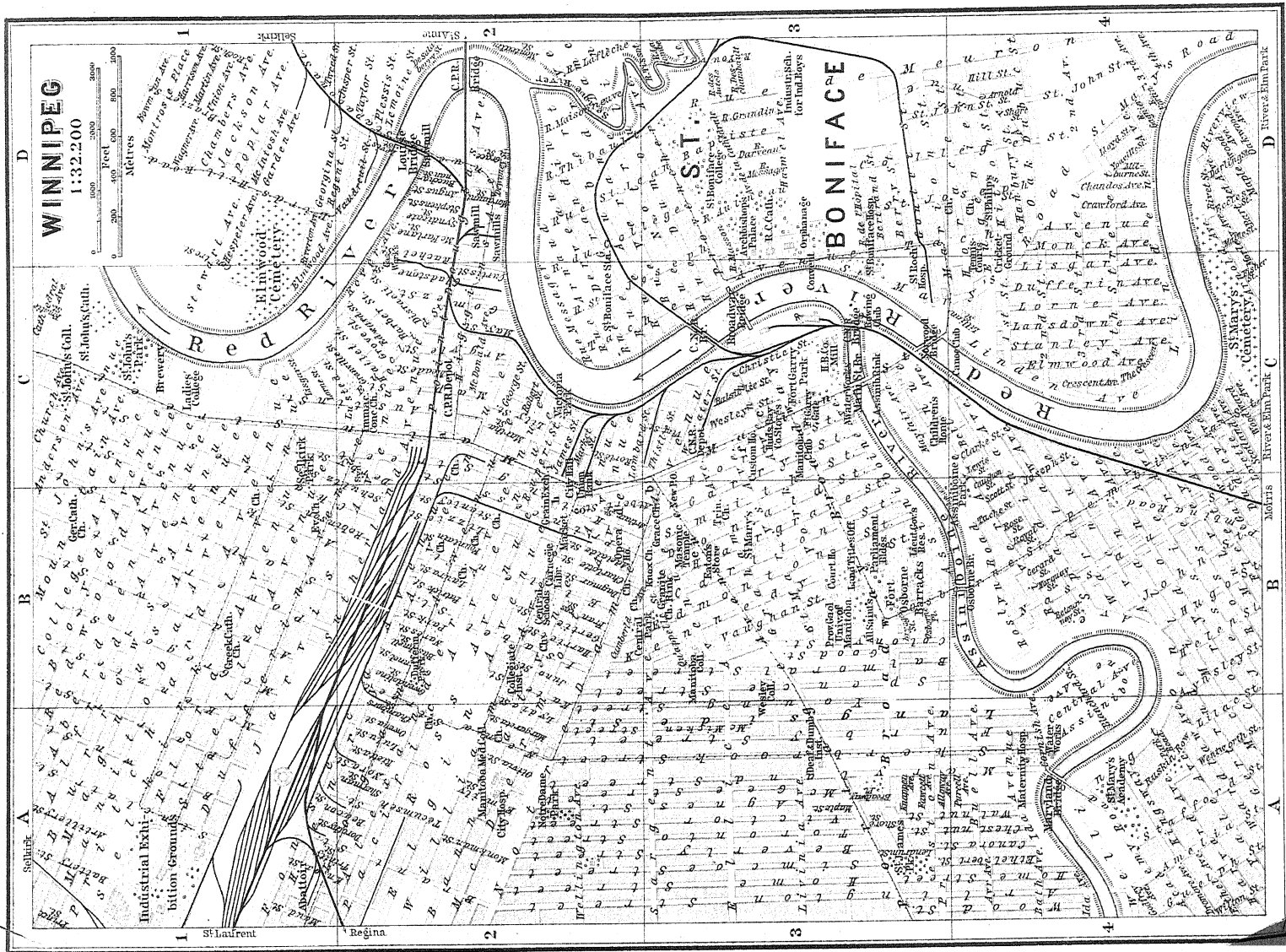
The sturgeon of Rainy Lake are said to afford a large proportion of the world's supply of caviar.

Beyond *Fort Frances* the line continues to run towards the W., following roughly the course of the Rainy River (see above). 252 M. *Emo*. Between (286 M.) *Rainy River* (Rail. Restaurant), with large lumber-mills, and (257 M.) *Beaudette* the train crosses the Rainy River and enters the United States (*Minnesota*). 309 M. *Roosevelt*.

322 M. *Warroad*, a recent but thriving little town with about 2000 inhab., lies at the S. end of the *Lake of the Woods* (p. 243), at the point where the *War Road River* flows into it and forms a good natural harbour, which has been improved by the U. S. Government. Steamers ply hence to various points on the Lake of the Woods, Rainy River, and Rainy Lake.

Beyond *Warroad* the line re-enters Canadian territory, running for about 50 M. through the woods of *East Manitoba*. 342 M. *Sprague*; 353 M. *Vassar*. Near (384 M.) *Bedford* we reach the valley of the *Red River*, which we now descend all the way to *Winnipeg*. 391 M. *Marchand*; 304 M. *Giroux*; 410 M. *Ste. Anne*, an old village; 424 M. *Lorette*. At (438 M.) *St. Boniface* (p. 249) we cross the Red River and enter —

439 M. **Winnipeg** (see R. 51).



51. Winnipeg.

Arrival. *Canadian Pacific Railway Station* (Pl. C, 2), Main St., cor. of Point Douglas Ave.; *Canadian Northern Station* (Pl. C, 3), Main St., cor. of Water St. (new joint station for C. N. R. and Grand Trunk Pacific Railway in progress on E. side of Main St., near Hudson Bay Co.'s Stores, Pl. C, 3). — *Omnibuses* of the Winnipeg Transfer Co. to hotels, 25 c. each person, including a moderate quantity of luggage.

Hotels. 'ROYAL ALEXANDRA' (Pl. a; C, 2), at the station, in Main St., from \$4, R. from \$1½; 'QUEEN'S' (Pl. b; B, 3), cor. of Portage Ave. and Main St., from \$2½; 'EMPIRE' (Pl. c; C, 3), Main St., from \$3; 'MARIAGGI' (Pl. d; B, 2), cor. McDermot Ave. & Albert St., R. \$2-5; 'CLARENDON' (Pl. e, B, 3), cor. Portage Ave. and Donald St., from \$2; 'WINNIPEG' (Pl. f; C, 3), Main St., \$2; 'LELAND HOUSE' (Pl. g; B, 2), opp. City Hall, \$2; 'SEYMOUR' (Pl. h; B, 2), Market St., \$1; 'BRUNSWICK' (Pl. i; C, 2), cor. Main St. and Rupert St., \$1½.

Restaurants. *Mariaggi's* (see above); *Fort Garry Restaurant*, Strathcona Block; *Criterion Restaurant*, McDermot St.; re-aurants at the *Railway Stations*.

Cabs. For cab-hiring purposes Winnipeg is divided into two *Divisions*, the first comprising the central part of the city (incl. the above-named railway-stations and hotels) and the second the district outside the first and within the city limits. Per drive within a division, 1-2 pers. 25 c, 3-4 pers. 50 c; with two horses, 1-2 pers. 50 c., each addit. pers. 25 c. From any point in one division to any point in the other, 1-2 pers. 50 c., with two horses 75 c., each addit. pers. 25 c. Per hour, 1-4 pers., 75 c., with two horses \$1. Double fares from 10 p.m. to 6 a.m. One trunk and hand-baggage for each pers. free. — *One-Horse Carriage*, without driver, first hr. \$1, each addit. hr. 75 c., half-day \$2½, whole day (10 hrs.) \$4; two-horse carr., \$2, \$1, \$4, \$7 (driver at the rate of \$2 per day extra). — *Saddle Horse*, \$1, 50 c., \$2, \$3.

Electric Tramways traverse the main streets and run to the suburbs (5 c.; after 11 p.m. 10 c.)

Opera House, Notre Dame St. (Pl. B, 2).

Clubs. *Manitoba Club* (Pl. C, 3), Garry St.; *Commercial Club*, Main St. **Post Office** (Pl. B, 3), Portage Ave., between Fort and Garry Sts., open 8-19 (i. e. 8 a.m. to 7 p.m.)

Consuls. United States, *Mr. S. H. Shank*, 366 Notre Dame St., German, *Mr. W. Hespeler*, Wardlow Ave., cor. of Nassau St.; French, *Mr. H. d'Hellencourt*. *Waghorn's Guide* (monthly, 10 c) will be found useful and convenient.

Winnipeg (755 ft.), the name of which is derived from the Indian *Ouinipigon* ('muddy water'), is a brisk and prosperous city with (1901) 42,430 inhab. (now about 90,000), situated at the confluence of the *Red River* and the *Assiniboine*, in the great level plain of the former. It is the capital of the *Province of Manitoba* (see p. 246) and owes its importance to the fact that it is the doorway and commercial focus of the Canadian North-West, with its boundless prospects of unexploited wealth. It has been called the 'Chicago of Canada', and handles even more wheat than the United States city, being the largest grain-market in the British Empire. The city covers an area of 20 sq. M. and contains many substantial and even handsome buildings. Its streets and boulevards are unusually wide and well laid out; the most important are *Main Street* (Pl. B, C, 1-3) and *Portage Avenue* (Pl. A, B, 3), for shops, and *Broadway* (Pl. A-C, 3), for private residences. It is dotted freely with churches and possesses 20 public schools and 300 acres of public parks. It will repay the leisurely tourist to stop overnight here and visit the city and its suburbs with some thoroughness; but the hurried traveller

may obtain a very fair idea of the chief sights in an hour's drive, or in one of the sight-seeing automobiles (fare 50 c. each).

Winnipeg is the most cosmopolitan city in the W., being the distributing point for emigrants from all the countries of Europe, who arrive here by hundreds daily. The Canadian Government has a fine office in the Canadian Pacific Railway Station for the inspection of emigrants, whom it provides with free lodgings for a week and assists in finding employment. The Winnipeg branch of the British and Foreign Bible Society (483 Main St.) circulates the Bible in 43 different languages, and ten Icelandic periodicals are published in Winnipeg and Selkirk (p. 250).

Winnipeg has a dry climate, claiming to enjoy 330 sunny days out of the 365 days of the year, and is considered very healthy on the whole. Its drinking water, however, has a bad reputation and should be avoided.

The first Europeans to visit Manitoba were the *Sieur de la Verendrye*† and his sons, who in 1731 et seq. explored the district surrounding Lake Winnipeg, and, among other settlements, established the *Fort Rouge* (1738), at or near the site of the present city of Winnipeg. Soon after came the conquest of Canada by the British and the troubles of the American Revolution, and the post was abandoned. The point between the Red River and the Assiniboine was long known to the early fur-traders as 'The Forks', but does not seem to have been permanently occupied till about 1803, when the North-West Co. established *Fort Gibraltar* here. The Hudson Bay Co. began to establish posts in the Red River district in 1796. In 1812 came Lord Selkirk's attempt to colonize the Red River Valley (comp. p. 250). His Highland settlers reached the centre of the continent by way of Hudson Bay and the River Nelson, and established themselves near Fort Gibraltar. The N.W. Co. regarded this as an illegal intrusion, and a struggle ensued in which the property of the Selkirk settlers was totally destroyed. In 1816 the Hudson Bay Co. attacked and destroyed Fort Gibraltar, and in 1817 another collision resulted in the death of Governor Semple, leader of the H. B. Co.'s party, and twenty of his men. The two rival companies, however, amalgamated in 1820-21, whereupon the Hudson Bay Co. moved its headquarters to the Forks, establishing *Fort Garry* on part of the site of Winnipeg (see below). The village of Winnipeg sprang up about ½ M. to the N., shortly before 1870. In 1836 the company bought out Lord Selkirk for 25,000*l.* In 1870, when the Province of Manitoba was created and its occupation by the Dominion Government was resisted by the *Red River Rebellion* under *Louis Riel* (p. 253), Fort Garry, including Winnipeg, contained only 240 inhabitants. It was at this time that Col. Wolseley made his famous march to Fort Garry (comp. p. 236). In 1881, when its name had been changed to *Winnipeg*, the population was 7985, and by 1891, owing to the opening of the C. P. R. and other causes, this figure had been almost quadrupled. The assessed valuation of the city is now about \$35,000,000, and in 1901 it produced manufactured articles to the value of \$8,616,248. Its bank clearances in 1902 amounted to \$188,370,000, a sum exceeded by Toronto and Montreal alone among Canadian cities.

The Province of Manitoba forms a nearly perfect square of 270 M., with an area of 73,956 sq. M., or about 8000 sq. M. less than that of Great Britain. In 1901 it contained 255,211 inhab. (25,228 in 1871, 62,260 in 1881, and 152,506 in 1891). The name was taken from Lake Manitoba and means,

† The Verendryes pursued their adventurous explorations much farther to the W. and are generally recognized as the discoverers of the Rocky Mts. (1743)

in the Cree dialect, 'spirit narrows'. The province belongs almost entirely to the great inland plain of the American Continent, and its surface is level and little wooded. The great source of its wealth lies in the rich and easily tilled soil, which is seen at its best in the *Red River Valley*. Immense crops of fine wheat are grown here, and also large quantities of oats, barley, and potatoes. The alluvial soil of this valley consists of the sediment of a former great lake of the post-glacial age, to which the name of Lake Agassiz has been given. The climate of Manitoba is very cold in winter and hot in summer (range from -40° to 95° Fahr.), but is not unhealthy. The mean annual rainfall is about 20 inches. A large part of the province is occupied by the great lakes of the Winnipeg group (comp. pp 250, 251). In 1903 the amount of grain exported from Winnipeg was over 60,000,000 bushels.

In MAIN STREET (132 ft wide; Pl. B, C, 1-3), near the centre of the city, stands the **City Hall** (Pl. B, 2), a large building with a central tower and corner-turrets (fine view from the tower, key obtained from the care-taker in the basement). Inside are portraits of the mayors of Winnipeg, by *Victor Long*. In front of the City Hall is a *Monument*, inscribed 'in memory of Fish Creek and Batoche' (see p. 253). Close by is the *Union Bank* (Pl. B, 2), twelve stories high, one of the fourteen banks of the city. Behind the City Hall is the *Market* (Pl. B, 2), a tasteful little building in an Italian style. Adjacent is the *Grain Exchange* (Pl. B, 2), which also harbours the *Board of Trade*.

Following Main St. towards the S. for about 650 yds., we reach (left) the *Canadian Northern Railway Station* (Pl. C, 3). — A little farther on, at the corner of York Ave. (Pl. C, 3; r.), are the *Custom House* and the *Hudson Bay Co.'s Stores*, the headquarters of this powerful historical corporation, not far from the site of Fort Garry (see p. 246). These stores form a huge bazaar, somewhat resembling one of the great Co-operative Stores of London, and repay a visit.

The *Hudson Bay Co.* was established in 1670 by a charter of Charles II., granting to Prince Rupert and a few associates the monopoly of the fur-trade over the vast tract of country — nearly as large as Europe — extending from Lake Superior to Hudson Bay and the Pacific. This monopoly, which practically included all the rights of government, was undisturbed for nearly 200 years. The company divided the whole territory into 4 departments, 33 districts, and 152 posts, employing at one time 3000 traders, agents, and voyageurs, besides many thousands of Indians. In bartering with the Indians the unit of account was the beaver-skin, which was the equivalent of two martens or twenty musk-rats, while the pelt of a silver fox was five times as valuable as a beaver. The rule of the company was on the whole beneficial to the Indians, who were not allowed to buy spirits. In 1783-4 the *North-West Fur Co.* was formed at Montreal, and for a time it carried on a bitter rivalry with the H. B. Co. In 1821, however, the two companies coalesced, retaining the name of the older corporation. As population increased in the territory, the proprietary tenure of the company was felt to be an unendurable anomaly, and in 1869 its rights were transferred by act of parliament to the Crown, while its territories were incorporated with the Dominion of Canada in return for a compensation of 300,000 *l*. The company still retains its posts and its trade and a right to a certain proportion of lands surveyed for settlement. Comp. histories of the *Hudson Bay Co.* by *Prof George Bryce* (1900), *Beckles Willson* (1899), and *Miller Christy*.

Behind the Hudson Bay Co.'s Stores is the large *Auditorium Rink*.

Nearly opposite the Hudson Bay Co. is the *Crown Timber Office*. From this point Main St. now goes on past *Fort Garry Park* (Pl. C, 3),

and reaches the Assiniboine River at its junction with the Red River (Pl. C, 3). In the meantime, however, we turn to the right and follow BROADWAY (Pl. A-C, 3), which leads, passing the *Manitoba Club* (1.; Pl. C, 3), to ($\frac{1}{2}$ M.) the *Parliament Buildings* (Pl. B, 3), a large and handsome pile, with wings, mansard roofs, and a low central tower. Visitors are freely admitted to all parts of the building and to the galleries of the *Legislative Chamber* (Manitoba has one chamber only) when the Legislature is in session. — To the left (S.) of the Parliament Buildings stands the *Lieutenant-Governor's Residence* (Pl. B, 3), in a similar style of architecture, and behind lies *Fort Osborne* (Pl. B, 3), the military headquarters, with its drill-shed and barracks.

To the right (N.) of the Parliament Building, also facing on Kennedy St., are the *Land Titles Offices* (Pl. B, 3) and the *Court House* (Pl. B, 3), yet another edifice with the inevitable mansard roofs; and behind the Court House lies the *Provincial Gaol* (Pl. B, 3).

To the W. of the Gaol is the new building, in plain grey stone, of the *University of Manitoba* (Pl. B, 3), erected in 1900 and forming the administrative centre of the five denominational colleges mentioned below and at p. 249. — To the S. in Broadway, facing the end of Osborne St., is the *Church of All Saints* (Pl. B, 3).

Following Kennedy St. from the Court House towards the N., we reach ($\frac{1}{3}$ M.; 1.) *Manitoba College* (Pl. B, 3), a large Presbyterian institution, attended by about 90 students and forming one member of the University of Manitoba (see above). [*Wesley College* (Pl. B, 3, 200 students), the Wesleyan member of the University, lies a little to the S., between Balmoral St. and Spence St.] From Manitoba College we may return towards the centre of the town through Ellice Ave., passing the *Granite Curling Rink* (Pl. B, 3), *Knob Church* (Pl. B, 3), *Grace Church* (Pl. B, 3), and the *Masonic Temple* (Pl. B, 3).

Among the other buildings of importance in Winnipeg proper are the extensive *City Hospital* (Pl. A, 2), in Bannatyne Ave.; *St. John's Episcopal College* (Pl. C, 1); the *Manitoba Medical College* (Pl. A, 2; these two affiliated to the University of Manitoba), the *Provincial Deaf and Dumb Institute* (Pl. A, 3), in Portage Avenue, the *C. P. R. Land Offices*, in the C. P. R. Station (p. 245), *St. Mary's Church* (Pl. B, 3), in St. Mary's Ave., cor. of Hargrave St.; *Trinity Church* (Pl. B, 3), Donald St., cor. of Graham Ave.; the *Children's Home* (Pl. C, 3), River Avenue; the *Eaton Department Store* (Pl. B, 3), in Portage Ave.; the new *Police Station* in James St. (Pl. C, 2), the new *Grain Exchange*, at the cor. of McDermot Ave. and Rorie St. (Pl. C, 2); and the new *Carnegie Library* (Pl. B, 2). There are several large *Flour Mills* and *Breweries* near the Red River. The finest *Private Residences* are in the quarters adjoining the Assiniboine, especially in Roslyn Road (Pl. B, 4), to the S. of that stream. *River Park* and *Elm Park*, the two chief parks of the city, are both in the Fort Rouge district, adjoining the Red River (beyond Pl. C, D, 4; electric

tramway). The *Industrial Exhibition Grounds* (Pl. A, 1) are in the N.W. part of the city.

St. Boniface (Pl. D, 2-4), on the opposite side of the Red River, is a separate municipality with (1901) 2019 inhab., most of whom are French. It was founded in 1818 and is now the Roman Catholic headquarters of N.W. Canada, containing a Roman Catholic *Cathedral* (Pl. D, 3), an *Archiepiscopal Palace* (Pl. D, 3), a *Convent* (Pl. D, 3), and a *Hospital* (Pl. C, 3), all near the river. A small monument to *Louis Riel* (p. 246) has been placed in front of the Palace, and he is buried in the French Cemetery here. About $\frac{1}{3}$ M. from the river stands *St. Boniface College* (Pl. D, 3), the Roman Catholic member of Manitoba University, with about 200 students. — On the S. side of the Assiniboine, $3\frac{1}{2}$ M. from the city, in the suburb of *Tuxedo Park*, lies the fine new *Manitoba Agricultural College*.

The Environs of Winnipeg offer little to detain the lover of picturesque scenery, but the sportsman will find good prairie-chicken shooting within a few miles of the town, and by going a little farther afield (e. g. to Lake Winnipeg or Lake Manitoba) he may get a shot at big game. Information as to equipment, guides, etc., may be obtained at the hotels. — *Steamers* ply on the *Red River* and *Assiniboine*, but at irregular intervals. — A pleasant short excursion may be made to *Silver Heights*, the model farm of Lord Strathcona, situated on the N. bank of the Assiniboine, $4\frac{1}{2}$ M. from the city.

FROM WINNIPEG TO ST. PAUL by the *Canadian Pacific Railway* and the *Soo Line*, 461 M., in $14\frac{1}{2}$ hrs. (fare \$13 25, sleeper \$3) — This line ascends the E bank of the *Red River* $1\frac{1}{2}$ M. *St. Boniface* (see above). At (65 M.) *Emerson* (see below) we enter the United States. 144 M. *Thief River Falls*, 237 M. *Detroit* (Minn); 314 M. *Alexandria*; 331 M. *Glenwood* 451 M. *Minneapolis* and (461 M.) *St. Paul* (see *Baedeker's United States*).

FROM WINNIPEG TO ST. PAUL by the *Canadian Northern & Northern Pacific Railways*, 482 M., in 18 hrs. (fares as above). This line runs to the S., along the W. bank of the *Red River*, the valley of which is one of the chief wheat-growing regions of the world, producing in a good year 30-40 million bushels. At (3 M.) *Portage Junction* the main line of the Canadian Northern Railway diverges to the right (R. 53), and from (40 M.) *Morris* (see below) a branch-line runs to (145 M.) *Brandon* (p. 251). At (65 M.) *Emerson* (Russell Ho.; U. S. Agent; see above) we reach the frontier. 68 M. *Pembina*, in N. Dakota, is the first station in the United States (small articles of luggage examined). We here cross the *Pembina River*, pass on to the track of the Northern Pacific Railway, and continue to follow the *Red River Valley*. 112 M. *Grafton*. At (162 M.) *Grand Forks* (830 ft., *Northern*, \$2-2 $\frac{1}{2}$), a railway-centre with (1900) 7652 inhab. and manufactures of carpet-sweepers, etc., we turn to the left (E.), cross the *Red River*, and enter *Minnesota*. 189 M. *Crookston* (Commercial, \$2), a city of (1900) 5359 inhab., with various industries. — At (257 M.) *Winnipeg Junction* we reach the main line of the Northern Pacific Railway, which we follow to the S.E. to (471 M.) *Minneapolis* and (482 M.) *St. Paul* (see *Baedeker's United States*).

FROM WINNIPEG TO ST. PAUL by the *Great Northern Railway*, 489 M., railway in $17\frac{1}{2}$ hrs (fares as above). This line also ascends the *Red River Valley*. — The train starts from the C. P. R. Station and runs over the C. P. R. tracks as far as the frontier. At (42 M.) *Morris* (Commercial Hotel) we touch the line above described. From (36 M.) *Rosenfeld Junction* a branch-line runs to the W. to (165 M.) *Napinka* (Leland Hotel; through-fare from Winnipeg \$8.75). This branch traverses a district largely settled by Mennonites from Russia. — 70 M. *Gretna* (U. S. Agent) is the last Canadian station, and (71 M.) *Neche*, on the 49th parallel of N. lat., is the first in the United States (*North Dakota*, custom-house examination). We then cross the *Pembina*. At (103 M.) *Grafton* we intersect the line described above. From (147 M.) *Grand Forks* (see above) the G. N. R. has two

routes to St. Paul, one on each side of the Red River. Our line remains on the W. side, traversing fine fields of wheat, and at (225 M.) *Fargo* (900 ft.) intersects the Northern Pacific R. R. Hence to (473 M.) *Minneapolis* and (489 M.) *St. Paul*, see *Baedeker's United States*.

FROM WINNIPEG TO SELKIRK AND WINNIPEG BEACH, 51 M., C. P. R. in 2¾ hrs. (fare \$1.50). This line runs towards the N. E., on the W. bank of the *Red River*, the *St. Andrew Rapids* on which have been made navigable by the Dominion Government. — 9 M. *Middlechurch*, on the site of Lord Selkirk's unfortunate colony (p. 246), is a settlement with (1901) 1231 inhabitants. 12 M. *Parkdale*; 17 M. *Victoria Park* — 20 M. *Fort Garry*, a post of the H. B. Co., is a picturesque relic of older days. Pretty drive hence along the river to (4 M.) Selkirk, bordered by wych-elms and ferns — 26 M. Selkirk or West Selkirk (*Merchants Hotel*, \$1½; *Canadian Pacific*, \$1¼, well spoken of), with (1901) 2188 inhab., the Provincial Lunatic Asylum, a cold storage warehouse (ammonia process; capacity, 1,600,000 lbs. of fish), and a government fish-hatchery, lies on the *Red River*, opposite *East Selkirk* (p. 245). Steamers ply hence in summer to various points on *Lake Winnipeg*. — The line now bends to the left and runs towards the N., passing (33 M.) *Clandeboye*, (41 M.) *Netley*, (48 M.) *Whyteford*, and (49 M.) *Ponemah*. — 51 M. *Winnipeg Beach* (*King Edward, Alexander, Waldorf*, \$ 2; large C. P. R. hotel in contemplation) is a new summer-resort, at the S end of *Lake Winnipeg* (see below), with good bathing and boating.

[*Lake Winnipeg* (710 ft. above the sea) is 260 M. long and varies in width from 5 M. to nearly 60 M. Like its companions, *Winnipegosis* and *Manitoba*, it is rather shallow, being nowhere more than 70 ft. deep. It receives the waters of the *Red River*, the *Winnipeg River*, and the *Saskatchewan*, and drains into *Hudson Bay* through the *Nelson River*. There are few settlements on its banks except some Icelandic colonies near its S. end and some scattered posts of the Hudson Bay Co. Steamers ply upon the lake in summer (comp. above), but there is little to tempt the ordinary tourist to visit it, though the sportsman might find his account in a properly guided exploration of its banks. The *Lake Winnipeg whitefish* (comp. p. 225) are said to be the best (annual catch 4,000,000 lbs.)]

FROM WINNIPEG TO TEULON, 40 M., C. P. R. in 2 hrs. (fare \$1.20). This line is the first section of a railway intended to run to the N., between *Lake Winnipeg* and *Lake Manitoba* and down the *Nelson River*, to *Port Nelson* on *Hudson Bay* (about 700 M.) 20 M. *Stonewall*, a lumbering village; 30 M. *Balmoral*; 35 M. *Ganton* — 40 M. *Teulon*. — The district traversed by this line is mainly settled by Icelanders and Norwegians. The shooting here is good (moose, elk, deer, prairie-chicken, water-fowl; comp. p. lvii).

FROM WINNIPEG TO SOURIS, 151 M., C. P. R. (*S. W. Branch*) in 8 hrs. (fare \$4.50). — This line traverses a fertile farming district, passing a number of small stations. From *Souris* (see p. 251) lines run to (127 M.) *Arcola*, and (215 M.) *Regina*, to *Napinka* (p. 249), and to *Brandon* (p. 251).

FROM WINNIPEG TO OAK POINT, 61 M., *Canadian Northern Railway* in 7 hrs. (fare \$1.90). This line runs to the N. W. in the direction of *Lake Manitoba*. — 23 M. *Grosse Isle*, the station for *Hanlan*; 37 M. *Woodlands*; 47 M. *Lake Frances Station*, situated between *Lake Frances*, 5 M. to the W., and *Shoal Lake*, a narrow sheet of water 30 M. long, 5 M. to the E. At (59 M.) *St. Laurent* we reach the shore of *Lake Manitoba* (see p. 251). — 61 M. *Oak Point*, the present terminus of the line, also lies on *Lake Manitoba*.

52. From Winnipeg to Banff.

921 M. *CANADIAN PACIFIC RAILWAY* in 38 hrs. (fare \$32.80; sleeper \$6, tourist-car \$3). From *Winnipeg* to (1482 M.) *Vancouver* in 2¼ days (fare \$50; sleeper \$12, tourist-car \$6). From *Montreal* to (2343 M.) *Banff* in 3 days (fare \$71.65; sleeper \$11, tourist-car \$7). From *Halifax* and from *Montreal* to *Vancouver*, see p. 283.

Winnipeg, see p. 245. The train runs to the W. over a flat and limitless prairie. As far as (41 M.) *Poplar Point* few settlements

or signs of cultivation are visible, most of the land being held by speculators. Farther on the prairie is covered with vast crops of wheat, offering a singularly imposing sight in harvest. The line of trees visible to the left (S.) marks the course of the *Assiniboine River*. 29 M. *Marquette* is just halfway between Montreal and Vancouver.

56 M. *Portage-la-Prairie* (854 ft., *Grand Pacific, Leland, Bellevue*, \$2), a grain-market with (1901) 3901 inhab., flour-mills, large grain-elevators, and various manufactures. It lies 15 M. to the S. of *Lake Manitoba* (see below). Portage-la-Prairie is also a station on the main line of the Canadian Northern Railway (see p. 262)

FROM PORTAGE-LA PRAIRIE TO YORKTON, 223 M., *Can. Pac. Railway* in 9 hrs (fare \$7). — This line runs to the N.W., through a prosperous farming district. 17 M. *Westbourne* is only 8 M. from the S. end of *Lake Manitoba* (see below) — 35 M. *Gladstone* (Rail. Restaurant) is the junction of the C. N. R. line to Edmonton (p. 261) — 79 M. *Minnedosa* (Minnedosa Hotel, \$1-1½, *Grand Central*), a flourishing little town of (1901) 1052 inhab., on the *Little Saskatchewan*. Good shooting may be obtained in the district. — A branch-line runs to the S. from Minnedosa to (15 M.) *Rapid City*. — 138 M. *Burle* (Rossin Ho.) From (155 M.) *Binscarth* a branch-line runs to (12 M.) *Russell* (Queen's, *Grand Central*, \$1-1½), in the *Shell River* district, 4 M. from which are a farm and agricultural school belonging to the Barnardo Home, London. Beyond this point we reach the upper valley of the *Assiniboine* and cross the river. 190 M. *Churchbridge*; 203 M. *Salicots* (Queen, Royal, 678 inhab. in 1901), a settlement of Welshmen, transferred hither from Patagonia, with a good cottage-hospital. — 223 M. *Yorkton* (Balmoral, \$1-1½) [Beyond Yorkton the line goes on to (43 M.) *Sheho*, whence it will be extended to *Wetaskwin* (p. 257), forming the shortest route from Winnipeg to Edmonton]

A short line runs due N from Portage-la-Prairie to (16 M.) *Delta*, at the S. E. end of *Lake Manitoba*, the irregularly shaped lake, 120 M. long, which gives name to the province (comp p 246) At present, however, this branch is used for freight only

The line now traverses a rough district, with numerous so-called 'bluffs' or sand-hills overgrown by stunted vegetation. From (78 M.) *MacGregor* a branch-line runs to (55 M.) *Varcoe*. Beyond (85 M.) *Austin* we reach the 'Second Prairie Steppe' (see p. xxxviii), another fine wheat-growing region, with an area of 105,000 sq. M. and an average altitude of 1600 ft. 103 M. *Carberry*, the chief grain-market for the district. Beyond (114 M.) *Sewell* we descend towards the valley of the *Assiniboine*. 127 M. *Chater* is the junction of the *Miniota* branch of the C. P. R. (p. 252). To the S.W. rise the *Brandon Hills*. We now cross the *Assiniboine* and reach —

133 M. *Brandon* (1190 ft., *Empire, Imperial, Grand View*, \$2; *Langham*, \$1½; *Railway Restaurant*, good), a substantial-looking little town of (1901) 5620 inhab., pleasantly situated on high ground. It is the chief grain-market of Manitoba, and its elevators are here, as in most towns of Manitoba, a conspicuous feature. Among the most prominent buildings is *Emigration Hall*. The Government has an experimental farm here (670 acres)

FROM BRANDON TO ESTEVAN, 164 M., *Can. Pac. Railway* in 7 hrs. (fare \$5 40) — This line taps the fertile district of the *Souris* or *Moose River*, which also yields much coal 25 M. *Souris* (Transit Ho., \$1-1½, with about 1800 inhab., is the junction of a line to Winnipeg (see p. 258),

and (59 M.) *Napinka* (see p. 249) of one to *Rosenfeld*, on the line from Winnipeg to Gretna (comp. p. 249). Beyond *Napinka* the line runs nearly due W. 67 M. *Mehta* (Metropolitan; Manitoba), 98 M. *Carievale*; 123 M. *Oxbow* (Oxbow Hotel; Palace) — At (164 M.) *Estevan* (Kelly Ho., \$ 1 1/2-2, p. 254) connection is made for *St. Paul* (see *Baddeker's United States*).

FROM BRANDON TO MORRIS, 145 M., *Canadian Northern Railway* in 15 1/3 hrs. (fare \$4; night spent at *Greenway*) — Intermediate stations unimportant *Morris*, see p. 249.

FROM BRANDON TO MINIOTA, 77 M., *Can Pac Railway* in 5 1/4 hrs. (fare \$ 2 30) — This line diverges from the main line at (6 M.) *Chater* (p. 251). 17 M. *Forrest* (see below) From (34 M.) *Gunter Junction* the railway runs to the W. to (33 M.) *Pettapiece*, (49 M.) *Oak River*, (57 M.) *Hamiota*, (66 M.) *Crandall*, (71 M.) *Arrow River*, and (77 M.) *Miniota*.

FROM BRANDON TO LENORE, 58 M., *Can Pa. Railway* thrice weekly (Mon., Wed., & Frid.) in 5 hrs. (fare \$ 1.75) This line diverges at (17 M.) *Forrest* from that to *Miniota* (see above) Stations unimportant.

Beyond Brandon we continue to traverse a well-cultivated and fairly populous district. For about 300 M. we pass through glacial drift overlying cretaceous formations. The *Souris* branch (see p. 254) diverges to the left at (141 M.) *Kemnay*. Beyond (165 M.) *Oak Lake* we leave the *Assiniboine* valley and ascend somewhat. 181 M. *Verden* (Balmoral Hotel, \$ 1 1/2); 197 M. *Ellthorn* (Manitoba Hotel; Rosebery, well spoken of). Between (204 M.) *Kirkella* and (212 M.) *Fleming* we enter the new province of *Saskatchewan*, formed in 1905 out of parts of *Assiniboia*, *Athabasca*, and *Saskatchewan* (see p. 253) and containing 230,650 sq. M. of area (pop. ca. 250,000).

The S. part of *Saskatchewan* includes the fertile valleys of the *Qu'Appelle* and the *South Saskatchewan*, in which several colonies of Highland crofters and others have been established and are doing well. Many towns and villages have sprung up along the railway.

Kirkella is the junction of the C. P. R. branch-line to (83 M.) *Esterhazy*, (147 M.) *Lipton*, and (201 M.) *Strassburg* (fare to this point \$ 6 95), which passes through a fine agricultural district.

From (220 M.) *Moosomin* (Queen's Hotel) stages run regularly to the N. to (4 M.) *Fort Ellice* and to the S. to the (50-60 M.) *Moose Mountain District*. 235 M. *Wapella* (Commercial); 257 M. *Percival*. — 265 M. *Broadview* (1950 ft.; Broadview, \$ 1-2, Victoria, \$ 1-1 1/2), a divisional station at the head of *Weed Lake*. A number of *Cree Indians* may usually be seen here, from their reserve, extending to the N. from the railway to the *Qu'Appelle River*. Central time now gives place to 'Mountain' time, 1 hr. slower (p. xii). — 281 M. *Grenfell*; 296 M. *Wolesey*. — Beyond (305 M.) *Sintuluta* we enter the celebrated wheat-belt of which (315 M.) *Indian Head* is the centre.

There is a Government experimental farm at *Indian Head* (630 acres). — *Indian Head* is said to be the greatest 'primary' or 'local' wheat-market in the world.

From (325 M.) *Qu'Appelle* (2134 ft.) a stage runs every week-day to (20 M.) *Fort Qu'Appelle* (hotel), on the *Qu'Appelle River*.

Good fishing is obtained in the *Fishing Lakes* into which the *Qu'Appelle River* expands here, and the shooting of the district is also good. Farther to the N. lie the *Touchwood Hills* and the *Beaver Hills*.

Beyond *Qu'Appelle* we traverse a small wooded district. 333 M. *McLean* (2284 ft.). Near (342 M.) *Balgonie* is the first of the large limits of the *Canadian Land & Ranch Co.*; 349 M. *Pilot Butte*.

358 M. **Regina** (1885 ft.; *Windsor Hotel*, from \$3; *Alexandra*), the capital of the new province of *Saskatchewan* (p. 252), is a brisk little town of (1901) 2645 inhab., with a considerable distributing trade for the country to the N. and S. The *Public Buildings* lie to the N. Regina is also the headquarters of the *North-West Mounted Police*, a body of about 600 picked men, under strict military discipline, formed to look after the Indians and maintain law and order in the N.W. provinces (including the Yukon). The success with which this handful of men, dispersed over so vast an area, performs its functions, and the respect with which it is regarded by white men and red men alike, are almost incredible.

Down to 1905 Regina was the capital of the so-called *North-West Territories of Canada*, embracing the whole of the vast territory bounded by the United States (49th parallel of N lat) on the S, British Columbia and Alaska on the W, the Arctic Regions on the N, Hudson Bay and Manitoba on the E, and Ontario on the S.E. (see Map at the end of the Handbook). Their total area was about 2,500,000 sq. M., or larger than all Europe outside of Russia. The five 'Provisional Districts' of *Assiniboia*, *Saskatchewan*, *Alberta*, *Athabasca*, and *Keewatin* were formed out of the S. and E. portions of the region in 1876 and 1882, and in 1895 the unorganized and unnamed part to the N. was formed into the districts of *Ungava*, *Franklin*, and *MacKenzie*, while the separate territory of *Yukon* (see p. 303) was created in 1898. Franklin contains the Arctic islands, with the peninsulas of Boothia and Melville. In 1905 the two new provinces of *Saskatchewan* and *Alberta* were formed out of the four provisional districts named first above, so that the N.W. Territories as at present constituted have an area of rather less than 2,000,000 sq. M. They are administered by a Commissioner, appointed by the Governor-General of Canada and aided by an Executive Council.

FROM REGINA TO PRINCE ALBERT, 250 M., *Canadian Pacific Railway* in 11 hrs. (fare \$10). — This line runs to the N.W., through a thinly peopled country, crossing the *Qu'Appelle* beyond (20 M.) *Lumsden*. 56 M. *Chamberlain*; 78 M. *Crak* (Rail Restaurant); 82 M. *Gurwin*; 111 M. *Kenaston*, 134 M. *Dundurn*. — At (160 M.) *Saskatoon* (Rail Restaurant, ca 3000 inhab.) it crosses the *South Saskatchewan* and then runs towards the N. and N.E., through the fertile farming district between this stream on the E. and the *North Saskatchewan* on the W. Near (169 M.) *Clark's Crossing* we intersect the *Canadian Northern Railway* (p. 262). — 178 M. *Osler*; 189 M. *Hague*; 200 M. *Rosithern* (Occidental, \$1½-2), 211 M. *Duck Lake*, 229 M. *Maddowall* — 249 M. *Prince Albert* (*Queen's*, \$1-2), a small farming town with (1901) 2275 inhab., situated on the *North Saskatchewan*, about 30 M. above its junction with the S branch. Comp. above.

The above-mentioned district, between the two branches of the *Saskatchewan*, was the scene of the *Riel Rebellion* of 1885. The district was largely settled by French half-breeds, who, dissatisfied with their treatment by the Dominion Government, rose in rebellion, induced the neighbouring Indians to join them, and summoned *Louis Riel* (p. 246) from Montana to be their leader. *General Middleton* was dispatched with a body of militiamen and volunteers to put down the rebels, and defeated them at *Fish Creek*, not far from *Hague* (see above), and again at *Batoche* (May 9th, 1885), on the *South Saskatchewan*, 7 M. from *Duck Lake* (see above). *Riel* was taken prisoner three days later, and was hanged, with eight of his Indian followers, at Regina.

FROM REGINA TO ARCOLA, 113 M., *Can. Pac. Railway* in 8 hrs (fare \$3 95) Among the intermediate stations are (9 M.) *Richardson*, (17 M.) *Kronan*, (44 M.) *Francis*, (64 M.) *Fillmore*, and (97 M.) *Forget* — 113 M. *Arcola*, see p. 250.

The region to the N. and N.W. of Regina has recently been largely settled by immigrants from the United States, men generally well taken by

with capital, experience, and energy, and excellently qualified to open up new ground. It is estimated that between 1900 and 1906 at least 200,000 settlers of this class crossed the frontier.

To the right, about 1 M. beyond Regina station, we see the *Lieutenant-Governor's House*, and a little farther on, on the same side, are the *Headquarters of the North-West Mounted Police* (p. 253). Large wheat-fields are passed, and cattle are seen grazing in the distance. 392 M. *Pasqua* (see below).

399 M. **Moose Jaw** (1765 ft.; *Moose Jaw Hotel*, owned by the C. P. R., from \$3; *Maple Leaf Hotel*, \$2, *Rail. Restaurant*), a divisional station, with (1901) 2042 inhab., mills, elevators, and large stock-yards. Its Indian name is said to mean 'the creek where the white man mended the cart with a moose-jawbone'.

FROM MOOSE JAW TO NORTH PORTAL, 169 M., *Can Pac Railway* in 6 hrs. (fare \$ 5.00) This line actually diverges from the C P.R. trunk-line at (7 M.) *Pasqua* (see above) and runs to the S. E. through a rolling prairie country, peopled to a large extent by recent immigrants from the United States (comp. above). The chief intermediate stations are (32 M.) *Rouleau*, (54 M.) *Milestone*, (74 M.) *Yellow Grass*, (92 M.) *Weyburn*, (109 M.) *Hallbrake*, (127 M.) *Macoun*, and (144 M.) *Estevan* (p. 252). At (169 M.) *North Portal*, on the frontier, it connects with the Soo-Pacific line to *Minneapolis* and *St. Paul* (see *Baedeker's United States*, 19-22 hrs., through-fare \$ 22.65).

Along the S.W. horizon extends the *Missouri Coteau* (see below). The line ascends steadily and at (434 M.) *Parkbeg* reaches the third of the *Great Prairie Steppes* into which this part of Canada is divided (p. xxxviii). This steppe extends hence to the base of the Rocky Mts. and has an average altitude of 3000 ft. It is, as a whole, more suitable for grazing and stock-rearing than for arable farming. — At (445 M.) *Secretan* the drift-hills of the *Missouri Coteau* are well displayed.

In Dakota and the N.W. Territories the so-called 'Continental Moraine' is represented by the *Missouri Coteau*, one of the most remarkable results of glacial action in the Dominion. The *Coteau des Prairies* in Minnesota (see *Baedeker's United States*) is part of the same great natural feature, which may be described as a mass of debris and travelled rocks, 800 M. long, 30-40 M. wide, and 1000-2000 ft. above the sea. Dr G. M. Dawson, who was the first to recognize the glacial origin of the *Missouri Coteau*, thinks that, while it may represent a Continental moraine, it is more probably due to a deposit of material from floating ice along the sloping front of the third prairie steppe. — The strips of ploughed land skirting the railway on each side are 'fire-guards', to protect it from prairie-fires.

453 M. *Chaplin* lies on the northernmost of the *Chaplin Lakes*, two large sheets of water, which have no outlet and are somewhat alkaline. Numerous other smaller lakes are passed. The district we are now traversing was the home *par excellence* of the buffalo, and marks of their trails and wallows may be seen in all directions. Antelopes, coyotes, and prairie-dogs are sometimes visible from the car-windows. 'Snow-breaks' are seen at intervals. — 473 M. *Morse* lies on a salt lake, and (490 M.) *Rush Lake* lies on a lake of its own name frequented by swarms of geese, ducks, and other water-fowl. Here, too, to the right, is the second of the large farms of the *Canadian Land & Ranche Co.*, each of which contains about 10,000 acres. — 500 M. *Swift Current* (2420 ft.; *Rail. Restaurant*) is a divisional point.

To the left are seen a *Government Meteorological Station* and the buildings of a sheep-farm of the Canadian Land Co.

Beyond this point the *Cypress Hills*, a remarkable plateau of cretaceous rocks capped by miocene gravels, rise to the S. (left) of the line; they are not very prominent in the view, though, towards their W. extremity, they reach a height of nearly 4000 ft. The district between the railway and the hills is well-watered and excellently adapted for grazing. 545 M. *Gull Lake*, with a stock-farm of the above-mentioned company; 575 M. *Crane Lake*, with the headquarters of the Can. Land Co. and a large stock-farm; 596 M. *Maple Creek*, with large cattle-yards and a station of the Mounted Police; 615 M. *Forres*. At (627 M.) *Walsh* we enter the new province of **Alberta**, which has an area of 250,000 sq. M. and an estimated population of 185,500. It was formed of the Territory of Alberta, with parts of Assiniboia, Saskatchewan, and Athabasca (comp. p. 253). — 652 M. *Coleridge*, with a large 'mixed' farm of the Can. Land Co.

654 M. *Dunmore* (2308 ft.) is the junction of the Crow's Nest branch of the C. P. R. to Lethbridge and the Kootenay Region (see R. 54). — From Dunmore Junction the train descends into the valley of the *South Saskatchewan*.

660 M. **Medicine Hat** (2170 ft., *American Hotel*, *Cosmopolitan Hotel*, \$2), a thriving little divisional station, with (1901) 1975 inhabitants. Picturesque Indians haunt the station, selling buffalo-horns and other curiosities. Coal is mined in this vicinity, and there are also large deposits of natural gas, utilized in the factories and residences of the town. Small steamers can descend the Saskatchewan all the way from Medicine Hat to (800 M.) Lake Winnipeg (p. 250). — On leaving Medicine Hat the train crosses the South Saskatchewan by a fine steel bridge, 1010 ft. long, and then ascends again from the local depression of the river-valley to the prairie-plateau. At (667 M.) *Stair* is a large cattle-farm of the Can. Land Co. Between this point and Calgary some of the C. P. R. irrigation-canals, mentioned at p. 256, may be seen on both sides of the line. Between (674 M.) *Bowell* and (685 M.) *Suffield* there is a descent, but beyond the latter point we rise steadily. At (695 M.) *Langevin* wells of natural gas have been sunk, and the gas is used in pumping water for the railway. The higher summits of the Rocky Mts., 150 M. distant, are said to be visible in clear weather. The endless green prairie is mainly used for cattle-ranches, though a few farms are also passed. From (757 M.) *Bassano* to Calgary the Laramie sandstone is seen overlying the cretaceous rocks. The trees outlining the Bow River are visible to the S. (left), and at (765 M.) *Crowfoot*, named after a famous Blackfoot chief, we reach its bank. This part of the railway is bordered on the S., for about 40 M., by the large *Reserve of the Blackfoot Indians*, formerly one of the most warlike tribes but now living as peaceable farmers. They number about 4000. Beyond (784 M.) *Gleichen* (2950 ft.) the snowy peaks of the Rocky Mts. are taken by

come into full view towards the W. and S.W. As we approach Calgary the *Bow River* is seen to the left.

840 M. Calgary (3430 ft., **Alberta Hotel*, Yale, \$2 $\frac{1}{2}$ -3; *Queen's*, from \$2; *Royal, Grand Union, Victoria*, from \$1 $\frac{1}{2}$; U. S. Consul, *Mr. E. S. Hotchkiss*), a thriving little prairie city of (1901) 4865 inhab. (now estimated at 15,000), provided with electric light and other modern conveniences, is largely built of a fine light-grey building-stone found in the neighbourhood, which gives it a handsome and substantial appearance. It lies on the S. bank of the Bow River, at its confluence with the *Elbow*; the tops of the Rocky Mts are seen above the surrounding hills. Calgary is the trading centre of an immense stock-raising region, the chief supply-station for the mining districts in the mountains, and the milling centre for a district producing large quantities of a fine quality of winter wheat, known as 'Alberta Red'. It is also an important station of the North-West Mounted Police and of the Hudson Bay Co. and contains the workshops of the C.P.R. The population contains a large proportion of a good class of English settlers, and it offers a more refined life than most Western cities of so recent origin. Calgary has two clubs and a sanatorium for consumptive patients. Among the chief buildings are the *Roman Catholic* and *Episcopal Cathedrals*, the *Methodist Church*, the *Western Canada College*, and the numerous *Banks*. To the S.W. of the town is the large *Reserve of the Sarcee Indians*.

No visitors to Calgary should fail to see something of the extensive *Irrigation Works* recently constructed by the Can Pac Railway. These consist of a system of main and secondary canals, which will ultimately irrigate about 3,000,000 acres of land, on both sides of the railway between Calgary and Medicine Hat (p. 255). The water for these canals is taken from the Bow river at Calgary; and the main 'intake' canal is 17 M. long, 60 ft. wide at the bottom, and 120 ft. wide at the water-line. This irrigation is expected to make the district affected, now used for stock-raising, of considerable value for agricultural purposes — One of the hills (400-500 ft.) round the town should be ascended for the sake of the *View of the Rocky Mts.

The possibility of successfully raising horses, cattle, and sheep on the elevated plateau of which Calgary is the centre is largely due to the fact that the winter temperature is considerably higher than that of Manitoba and other points to the E. This is mainly owing to the influence of the warm *Chinook Wind* (resembling the Alpine *Föhn*), which blows down from the mountains. 'The bunch-grass' of the prairie cures itself as it stands and forms excellent forage in winter.

'The prevailing winds (on the Pacific Coast) are from the West and in striking the coast range they are deflected upwards; the expansion of the air resulting from the decrease of atmospheric pressure causes a diminution of temperature. As soon as the point of saturation or dew-point is reached, the moisture is precipitated in the form of rain. After passing over the coast range, the air comes down into the slightly lower region around Kamloops, and, being heated by the compression consequent upon increased atmospheric pressure, it is much above dew-point, so that it is always dry. Pursuing its course eastwards, it soon strikes the western slope of the Selkirks, the highest range of the Rocky Mountains; the air is again forced upwards; and on coming to the altitude of the summit of the coast range, dew-point is reached and rain precipitated. It continues to fall as long as the air ascends, that is until it has passed over the summit. This explains why there is more rain on the western than on the eastern sides of the Coast and Selkirk ranges. Still proceeding

eastwards the wind passes the summit of the Rocky Mountains, the air descends into the plains of the North-West Territories and is heated by the compression due to greater atmospheric pressure, but having previously absorbed the latent heat given up by the moisture which fell as rain on the Coast range and the Selkirks, it is now at a much higher temperature than it was when at the same altitude on the western side of the mountains, it is also much above dew-point. This is the explanation of the dry climate of the western plains and of the paradoxical Chinook winds, which appear as if warmed by passing over numberless fields of snow and ice' (*E. Deville*).

FROM CALGARY TO EDMONTON, 192 M., *Can. Pac. Railway* in 11 hrs. (fare \$7.70) — This line runs nearly due N. from Calgary into the valley of the *North Saskatchewan*. A view of the peaks of the Rocky Mountains Park (p. 259) is obtained to the left as we leave Calgary. 20 M. *Aurdræ*; 48 M. *Didsbury*; 58 M. *Olds*, 67 M. *Bowden*, on a small lake. Farther on we descend the valley of the *Red Deer River* (left), crossing it near (95 M.) *Red Deer* (meal-station; Alberta, \$1½-2; 1400 inhab.) Beyond (130 M.) *Ponoka*, to the W. of which is the *Reserve of the Sharp-Head Indians*, we cross *Battle River* and traverse the reserve of the *Sampson, Ermine Skin, and Bob-Tail Indians*. To the left rise the *Bear Hills*. 152 M. *Wetaskwin* (comp. p. 251); 174 M. *Leduc*. We then cross the *Papas Chase Indian Reserve* — 192 M. *Edmonton*, see p. 261. The C.P.R. terminus is at *South Edmonton* or *Strathcona* (comp. p. 264).

FROM CALGARY TO MACLEOD, 108 M., *Can. Pac. Railway* in 4 hrs. (fare \$4.36) — This line runs to the S., into the ranching-district mentioned at pp. 251, 255. We cross numerous small rivers. 40 M. *High River* (Rail. Restaurant). To the right rise the *Porcupine Hills*, backed by the *Livingstone Range*. Near (50 M.) *Cayley* we skirt a narrow lake, which is frequented in October by myriads of wild ducks — 108 M. *Macleod* (Queen's, \$3; Macleod, \$2), with (1901) 1701 inhab., is the centre of a prosperous farming district and lies on the *Old Man River*, a tributary of the *Belly*. Railway to *Lethbridge* and to the *Kootenay District*, see R. 54.

Beyond Calgary the train ascends rapidly among the green foothills and river 'benches' at the base of the Rocky Mts., following the winding course of the Bow and crossing it at (849 M.) *Keith* (3555 ft.). Large horse, cattle, and sheep ranches are passed. Beyond (862 M.) *Cochrane* (3749 ft.) are some coal-pits. Fine view of the snow-capped Rockies, rising above the foothills (left). 873 M. *Radnor* (3885 ft.); 881 M. *Morley* (4070 ft.). We traverse the *Stony Indian Reservation* and reach the E. boundary of the Rocky Mountains Park (p. 259). — Near (894 M.) *Kananaskis* (4220 ft.), with its saw-mills, we cross the river of that name, just above its confluence with the Bow. About ½ M. above the junction the Bow forms the beautiful **Kananaskis Falls*, 40 ft. high (not visible from the train).

Beyond Kananaskis the mountains close in on either hand and form an apparently impenetrable barrier. Beyond *Exshaw* (a new town with large cement-works and about 1000 inhab.) we pass the small *Lac des Arcs* (l.) and enter the **Bow River Gap* (4230 ft.), enclosed by the *Fairholme Mts.*, culminating in *Grotto Mt.* (8840 ft.; trail to top; 'View'), on the right, and *Pigeon Mt.* (7815 ft.), on the left. This fine gateway to the Rocky Mts. leaves barely room for the river and railway to pass side by side. At its E. end is (902 M.) *Gap Station* (4200 ft.). A magnificent 'View (l.) is obtained of *Wind Mt.* (10,400 ft.) and the triple peaks of the *Three Sisters* (9705 ft.).

A remarkable contrast between the ranges ahead is noticeable. On the right are fantastically broken and castellated heights; on the left, massive snow-laden promontories, rising thousands of feet, penetrated by

enormous alcoves in which haze and shadow of gorgeous coloring lie engulfed. The jaggedness of profile observed from the plains is now explained. These mountains are tremendous uplifts of stratified rocks, of the Devonian and Carboniferous ages, which have been broken out of the crust of the earth slowly heaved aloft. Some sections miles and miles in breadth, and thousands of feet thick, have been pushed straight up, so that their strata remain almost as level as before; others are tilted more or less on edge (always on this slope towards the east) and lie in a steeply slanting position; still other sections are bent and crumpled under prodigious side-pressure, while all have been broken down and worn away until now they are only colossal fragments of the original upheavals. This disturbed stratification is plainly marked upon the faces of the cliffs, by the ledges that hold the snow after it has disappeared elsewhere, or by long lines of trees, which there alone can maintain a foothold; and this peculiarity is one of the most striking and admirable features of the scenery.' — *Annotated Time Table of Can Pac Ry.*

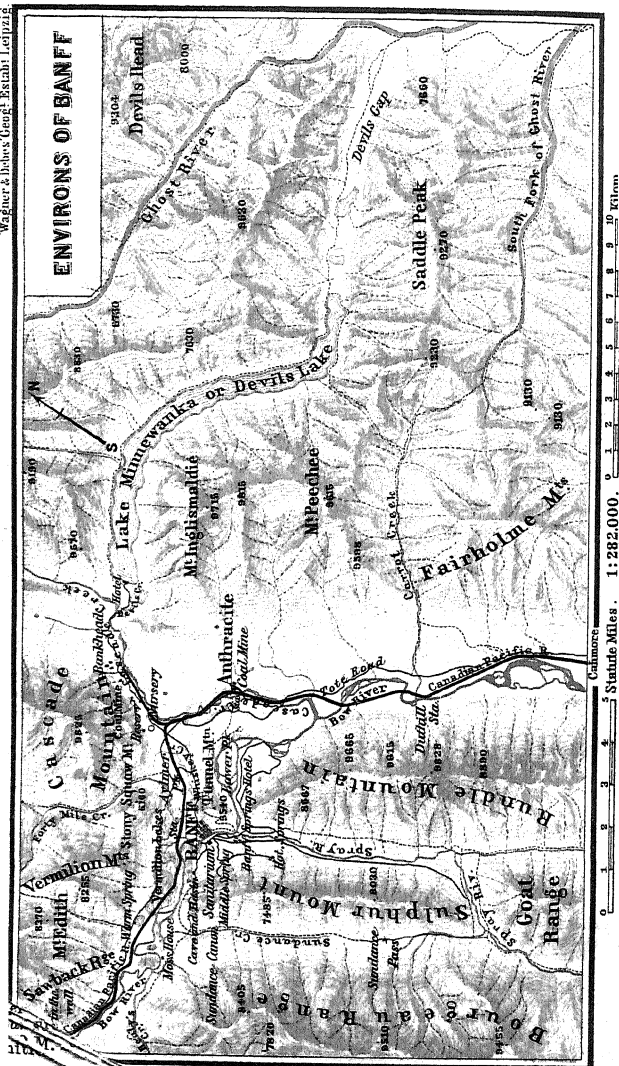
On emerging from the Gap, the train turns to the right (N.). As we near (907 M.) *Canmore* (4285 ft.; Pullman, Canmore, \$2), we have a splendid profile view (1.) of the Three Sisters (p. 257). On a hill behind the station stands a group of white conglomerate rocks, weather-worn into fantastic shapes. Good fishing and shooting are obtained near Canmore, and coal is now being raised in its vicinity to a considerable extent. — To the left, beyond the Three Sisters, rises the long many-peaked *Mt. Rundle* (p. 259), and through the deep notch between them runs the *White Man Pass Trail* to the *Kootenay* (p. 288). To the left flows the beautifully tinted Bow. To the right rises *Mt. Peechee* (9615 ft.), named after a famous Indian chief, who travelled with Sir George Simpson of the Hudson Bay Co. Ahead of us, apparently blocking our passage, towers *Cascade Mt.* (p. 259). We cross the Bow twice, but near (915 M.) *Anthracite* (4490 ft.) we diverge to the right along its tributary the *Cascade*, which we also cross twice. The line now turns to the right, quits the Cascade, and returns to the Bow. Near Banff station we pass a corral containing a herd of 60 buffaloes. The enclosure also includes deer, moose, and elk, while smaller native animals are also preserved here.

921 M. Banff. — *Hotels.* *BANFF SPRINGS HOTEL (C. P. R.), finely situated on a bluff above the confluence of the Bow and the Spray, $1\frac{1}{2}$ M. from the railway-station, with hot sulphur-baths, open-air swimming-baths, tennis-court, and bowling-alley; good cuisine and attendance; \$3 $\frac{1}{2}$ -4. In the height of the season (July & Aug.) it is advisable to secure rooms in advance. — GRAND VIEW VILLA (5200 ft.; view), at the Upper Hot Springs, with the sulphur-baths, physician, and nurses (comp. p. 280); SANITARIUM HOTEL, near the Middle Spring, $\frac{1}{2}$ M. from the railway-station, \$2-4; ALBERTA, unpretending, \$2; KING EDWARD, near the railway-station, \$1 $\frac{1}{2}$ -2; WINDSOR. — Private *Boarding House*, \$1, near the station.

Omnibus from the railway-station to Banff Springs Hotel 50c., to Sanitarium Hotel 25c. — *Carriage* for 1 pers. \$1 for first hr., 50c. for each addit. hr.; each addit. pers. 25c. per hr.; seat in carriage to Lake Minnewanka and back \$2. — *Saddle Horse*, 75c. for first hr., 50c. for each addit. hr., \$2 per half-day, \$3 per day (10 hrs.).

Guides. The C.P.R. Co. has recently stationed some experienced Swiss guides in the National Park, the regular charge for whose services is \$2 $\frac{1}{2}$ per half-day, \$5 per day. — Outfits for extended mountain-trips may be secured from D. W. Peyto, J. Simpson, T. E. Wilson, or J. Brewster.

ENVIRONS OF BANFF



Banff (4520 ft.), a village with about 800 inhab., splendidly situated in the valley of the Bow, among the giants of the Rocky Mts., is the station for the *Rocky Mts. Park of Canada* and one of the most charming summer-resorts on the American continent. The village lies a little to the S of the railway-station. Immediately to the N. rises *Stony Squaw Mt.* (6160 ft.), to the right of which frowns the massive *Cascade Mt.* (9825 ft.). To the E. are *Mt. Inglismaldie* (p. 262) and *Mt. Peechee* (p. 262). The low isolated elevation in the S.E. foreground is *Tunnel Mt.* (p. 260), to the S. of which tower the peaks of *Mt. Rundle* (p. 262). To the right of the last, on the other side of the *Spray*, are the *Sulphur Mts.* (7485-8030 ft.), beyond which protrudes the N. end of the *Bourgeau Mts.* (7820-9510 ft.), while to the W. we look up the Bow Valley to *Pilot Mt.* (p. 268) and other summits of the main range of the Rocky Mts. Numerous summer-cottages have recently been built in the pine-woods by visitors from the E. — The traveller is strongly advised to halt at Banff for at least a day or two. Banff is a more favourable centre than Laggan, Field, or Glacier House for the visitor who is a not too ambitious mountaineer. The roads, however, are often dusty and never sprinkled.

The ****Rocky Mountains Park of Canada** (comp pp. 257, 268), set apart by the Dominion Government as a national reservation and pleasure-ground, is an irregular triangle about 5400 sq. M. in extent, bounded on the W. by the watershed of the main range, and rivalling the Yosemite Valley in grandeur and variety of scenery within limited space. It includes half a-dozen subsidiary ranges of the Rocky Mts., attaining a height of 8000-10,000 ft., a beautiful lake and a series of hot sulphur springs. Numerous excellent roads and paths, the number of which is being steadily added to, afford facilities for driving, cycling, riding, and walking, while the fisherman will find excellent opportunities for his craft in the lakes and streams (comp p. lii). Shooting is not allowed within the Park limits; but Banff forms a good centre for the pursuit of the big game in the neighbouring mountains, including bear, elk, caribou, deer, wild goats (*Haplocerus montanus*), and bighorn sheep (guides on application to the Superintendent). The temperature in summer seldom exceeds 80° Fahr., and the air is pure and bracing. Boating (incl. steam-launches and canoes) may be enjoyed on the Bow River, above the bridge, and on Lake Minnewanka. July and August are, perhaps, the best months for a visit. The Park is under the charge of a Superintendent appointed by Government (*Mr. Howard Douglas*; office in the village); and the Park Regulations (in regard to game, etc.), to which strict obedience is enforced, may be seen at any of the hotels. Camping permits (\$1 per tent) may be obtained from the Superintendent. — Near the village is the *National Park Museum*, containing specimens of the fauna, flora, and mineralogy of the region.

Mountain-climbers who wish to make ascents in the Rocky Mts from Banff, Laggan, Field, and other points would do well to consult 'In the Heart of the Canadian Rockies', by *Rev James Outram* (1905); 'The Rockies of Canada', by *Walter D Wilcox* (1903); 'Climbs and Explorations in the Canadian Rockies', by *Hugh E. M. Stutfield* and *J. Norman Collie* (1903); and 'Appalachia', the organ of the *Appalachian Mountain Club*, of Boston. All of these are well illustrated. — Many of the ascents described at pp 262-269-273, & 275-279 of this Handbook are from notes kindly furnished by *Mr. W. S. Jackson*, of Upper Canada College (p 197), *Professor Fay*, of Boston, *Mr. George Vaux Jr.*, of Philadelphia, and *Mr. A O Wherry*, President of the newly formed Alpine Club of Canada (1905).

H. B. Co.
being taken by

The natural centre of visitors is the *Banff Springs Hotel* (p. 258), which stands on a bold bluff, overlooking the confluence of the *Bow* and the *Spray*, about $1\frac{1}{2}$ M. to the S. of the station; and this is taken as the starting-point of the various excursions described below. To the E. rise the striking and curiously-shaped peaks of *Mt. Rundle* (p. 262). The hotel commands a fine general view of the Park.

The 'look-out' at the N.E. corner of the hotel affords a charming *View of the confluence of the blue *Bow* and the rapid-rushing *Spray*, almost immediately below us. Just before the confluence the *Bow* forms a series of foaming white *Falls* or *Cataracts*, to obtain a nearer view of which we descend to the road skirting the river-bank and ascend the path leading to the top of a bluff overhanging the upper part of the falls. We should then follow the road to the S. to the bridge which spans the *Spray*, just before it joins its larger brother. Beyond the bridge the road ('*Aspen Avenue*') leads down the valley of the *Bow* for about 4 M. (making a loop of 8 M.), between the perpendicular walls of *Tunnel Mt.* (see below) on the left and *Mt. Rundle* (p. 262) on the right. The meadows over which we pass are carpeted with the vivid red painter's brush, white and yellow marguerites, asters, fireweed, golden rod, blue-bells, and innumerable other wild flowers, varying according to the season.

To reach the **Upper Hot Springs** (5200 ft.) we either follow the roundabout carriage-road (ca. $2\frac{1}{2}$ M.; see Map) or take the direct foot-path through the wood. The latter begins near the *Banff Springs Hotel* and ascends at an easy gradient to the main road, reaching it opposite the *Grand View Villa* and the *Government Baths*. The springs ($110-115^{\circ}$ Fahr.) rise on the slope of the *Sulphur Mts.* (p. 259). The water contains sulphate of lime, soda, and magnesia, resembling that of Hot Springs, Arkansas (see *Baedeker's United States*), and is efficacious in rheumatism, affections of the skin and blood, etc. It is used both internally and externally. The Dominion Government has erected a good bath-house, adjoining which is an open-air swimming pool. See also p. 261 and p. 258.

The ascent of ***Tunnel Mt.** (5540 ft.; there and back 2-3 hrs.) is one of the favourite short excursions, for the sake of the view. An excellent bridle-path leads to the top, and a carriage-road has been constructed about two-thirds of the way up (horse \$2). We follow the main road leading towards the village and cross ($\frac{3}{4}$ M.) the bridge over the *Bow*. We then pass the *Methodist Church* (at the first turn to the right), take the second turn to the right, follow the road in the direction of *Tunnel Mt.*, and soon reach a house with a sign-board indicating the bridle-path, which is plainly marked and easy. Walkers or riders may use the path in going and the road in returning (or vice versâ). The path at the top leads also to the N. bluff of the mountain. On the S. and E. the mountain descends precipitously to the valley.

*View from the top is grand. The *National Park* is, perhaps, the greatest advantage from this point, as many of the beauties

of the valleys are lost from the higher mountains. Among the conspicuous points are the village, the railway-station, the Vermilion Lakes (p 262), near the station; the Sanitarium; the Banff Springs Hotel; the houses at the Cave and Basin (see below); the Hot Springs; the bridge over the Bow; the winding green Bow, on both sides; the Cascade River (but not its confluence with the Bow), the Spray, and its junction with the Bow; Cascade Mt and the Squaw (N.); Mts. Inghismaldie and Peechee (E.); the sloping peaks of Mt Rundle (S.); the heavily-timbered Sulphur Mts and the Goat Range (W ; concealing Bourgeau Range); and Mt. Massive (N.W.)

The hot springs known as the *Cave* and the *Basin* (ca. 4700 ft.) form the object of another short excursion. We proceed as above to the ($\frac{3}{4}$ M.) bridge over the Bow, but turn to the left without crossing it, beyond the *Sanitarium* (l.; p 258), and follow the road (sign-post) leading to (1 M.) the group of houses adjoining the Cave and Basin, at the N. end of the Sulphur Mts (comp. Map). The **Cave* is a sulphurous spring rising within a calcareous grotto, and the **Basin* or *Pool* is an open-air spring of the same character close by. Both bathing-places (temp 90-95°) are approached through cottages containing bathing-rooms (fee 25 c., incl. dress and towels).

The so-called Cave is not a subterranean formation at all, but really the cone of a now quiescent geyser, similar to those in the Yellowstone Park (see *Baedeker's United States*). It was discovered by an orifice at the top of the mound in which the spring occurs (which may be seen by climbing up the outside), and the present lateral passage leading into it is artificial. The atmosphere within the Cave is full of slightly sulphurous steam or vapour, and the Basin, on a fine day, affords, perhaps, the more attractive bathing-place of the two. The depth of each is 5-6 ft. The custodian points out formations on the roof of the cave that are supposed to resemble various British statesmen. — Beyond the Basin we may follow the road for $1\frac{1}{2}$ M. more to the entrance (l) of the fine **Sundance Cañon*, where the stream descends in a series of cascades through a romantic rocky gorge with sides 200 ft. high (path). — The road running to the S from the Sanitarium leads to the so-called *Middle Spring*.

The favourite drive in the Rocky Mts. Park is that to **Lake Minnewanka* (coach daily in summer), a distance of 9 M. (fare, see p. 258). The road crosses the bridge, traverses the village, and then runs to the right (N.E.), following the course of *Whiskey Creek*. About 4 M. from the hotel it crosses the railway and traverses the plain at the base of *Cascade Mt.* (l.), with the waterfall which gives it its name. To the right flows the *Cascade River*. After passing (1 M.) *Bankhead*, with ca. 2000 inhab. and large mines of anthracite coal belonging to the C. P. R., we again (3 M.) turn to the right (S.E.), cross the Cascade River and *Devils Creek*, and soon reach (1 M.) the W. extremity of the lake, where there are a small inn, a steamer, and a flotilla of boats to let. The inn contains a small museum of local curiosities. The views on this drive are very fine. — **Lake Minnewanka*, or *Devils Lake* (4800 ft. above the sea), lies in a narrow trough-like valley between the *Fairholme Range* (Inghismaldie, Peechee, etc.) on the W. and the *Palliser Mts.* on the E., and is about 11 M. long, with an average width of $\frac{1}{2}$ -1 M. Its greatest depth is about 300 ft. The W. end is separated from the E. by a precipitous unnamed mountain (7570 ft.) being taken by

and *Mt. Inglismaldie* (9715 ft.) on the right. At the E. end of the lake are some curious rocks known as the *Hoodoos*. To the E. of the lake the valley, here containing two ponds, is known as the *Devils Gap* and lies between the *Devils Head* on the left and *Saddle Mt.* on the E. About 6 M. beyond the lake is the *Ghost River*, which joins the Bow near Morley (p. 257). Devils Lake contains a variety of trout (*Salvelinus namaycush*), which sometimes attains a weight of 30 lbs. and is caught by trawling.

Among other pleasant excursions within the limits of the National Park are the drive to (4½ M.) *Anthracite* (p. 258) by the extension of the carriage-road over the flank of Tunnel Mt (p. 260); a trip by steam-launch or small boat on the *Bow River* (boats near bridge, launch for 1 or more pers \$5); a canoe-trip from the Bow up the *Forty Mile Creek* and below the railway-bridge to the **Vermilion Lakes* (see Map), where an excellent view is obtained of Mt. Massive, Pilot Mt., and adjoining peaks, and a walk through the valley of the Spray (bridle-trail to *Spray Lakes*, 30 M.)

MOUNTAIN ASCENTS. *Sulphur Mt* (8030 ft.) is easily ascended from the Hot Spring in 5-6 hrs. by a corkscrew bridle-path leading to the Government Meteorological Observatory (7484 ft.) near the top (fair view). The Observatory is connected by telegraph with the Museum (p. 259), where the records are made. — *Mt. Rundle* (so named after a missionary to the Crees and Assiniboines) or the *Peaks* (S. peak, 9828 ft.; central peak, 9615 ft.; N. peak, 9665 ft.) may be ascended by mountaineers in one long day (there and back; guide desirable; view). — *Cascade Mt* (9825 ft.) may be ascended from the hotel in 4-5 hrs. (view). — *Mt. Edith* (8370 ft.) affords a sporting rock-climb. — *Mt. Inglismaldie* (9715 ft.) and *Mt. Peechee* (9615 ft.) do not repay the toil of an ascent. — *Mt. Assiniboine* (ca. 11,860 ft.), the 'Matterhorn' of the Rockies, rises about 20 M. to the S. of Banff and was first ascended on Sept. 3rd, 1901, by the *Rev James Outram* and the Swiss guides *Hasler* and *Bohren*, by a route circling round the mountain to its S.W. arête. The entire trip, there and back, occupied 5½ days; the actual ascent from the last camp (7200 ft.) took ca 6½ hrs. The view is of immense extent, including an interminable sea of peaks on every side except the E. (Ottertail Mts., Mt. Stephen, the Cathedral, Mts. Victoria, Lefroy, Temple, Hungabee, Deltaform, etc.). The climb is, of course, one for experts only. — The mountain-climber will find numerous other foemen worthy of his steel in the other ranges either in or closely adjoining the Park.

PASSES. Two passes lead from the *Spray Valley* into the *Kootenay Region* (pp. 287, 288), one passing between the *Goat Range* and *Mt. Rundle*, the other between the *Goat Range* and the *Bourgeois Mts.* — A pass leads through the *Devils Gap* and along the *Ghost River* (see above) to *Morley* (p. 257).

53. From Winnipeg to Edmonton via Canadian Northern Railway.

827 M. CANADIAN NORTHERN RAILWAY in 39 hrs (fare \$27 60; sleeper \$5). This line runs into the Saskatchewan valley, opening up some of the great grain-producing regions of the North West

From Winnipeg to (3 M.) *Portage Junction*, see p. 249. Our line here diverges to the right from that to Emerson (St. Paul) and runs towards the W. 12 M. *St. Charles*; 21 M. *White Plains*; 31 M. *Elk*; 43 M. *Oakville*; 49 M. *Curtis*.

At (56 M.) *Portage-la-Prairie* (see p. 251) the Canadian Northern Railway crosses the Canadian Pacific Railway and holds on towards the N.W. — 57 M. *Arizona Junction*, the diverging point to (75 M.) *Carberry*; 61 M. *Walldon*; 75 M. *Beaver*.

From (84 M.) *Neepawa Junction* a branch-line runs to the W. to (33 M.) *Neepawa* (King Edward; Hamilton), a small prairie-town with (1901) 1418 inhab., whence another branch-line goes on to (84 M. from Neepawa) *Rosburn*. — 88 M. *Golden Streams*.

93 M. *Gladstone* (Rail. Restaurant; 731 inhab.) is the junction of the C. P. R. line to *Yorkton* (see p. 251). — 107 M. *Plumas*. — From (139 M.) *McCreary Junction* a branch-line runs to (41 M.) *Neepawa* (see above). — 157 M. *Makinak*; 165 M. *Ochre River*.

178 M. *Dauphin* (*Grand View*; *King's*; *Manor House*; meal-station), with (1901) 1135 inhab., lies at the S. end of *Lake Dauphin*, a sheet of water 25 M. long and 8-12 M. wide. It is a distributing centre of some importance and the junction of a railway to Prince Albert.

FROM DAUPHIN TO PRINCE ALBERT, 364 M., *Canadian Northern Railway* in 18 hrs. (fare \$ 13.65). This line runs towards the N.W. through a wheat-growing district, partly settled by Galicians, Doukhobors (see below), and Scandinavians. — 4 M. *Gilbert Plains Junction* is the actual point of divergence from the main line. From (18 M.) *Sifton Junction* a branch-line runs to the N.E. to (21 M.) *Winnipegosis* (362 inhab.), situated on *Lake Winnipegosis*, a huge body of water rivalling *Lake Manitoba* in size (120 M. by 27 M.). There are large salt-wells here. Beyond *Sifton Junction* the line bends to the left (N.W.) 33 M. *Ethelbert*; 42 M. *Garland*; 52 M. *Pine River*; 63 M. *Sciater*, on the S. branch of the *Duck River*, flowing into *Lake Winnipegosis*; 70 M. *Cowan*, on the N. branch of the *Duck River*. The line now curves to the W. 81 M. *Fishers*. — 102 M. *Swan River* (Rail. Restaurant, 254 inhab.), where we pass from Central time to Mountain time, is the junction of a short line to (20 M.) *Bemto*. *Swan River Valley* is largely peopled by the 'Doukhobors', a Quaker-like set of Russian settlers, of whom there are about 3000 in this region. Their chief village is named *Voynesema*. In spite of their peculiar customs, to which they adhere with considerable tenacity, these men make good and thrifty farmers and are considered as desirable immigrants. In 1902 about 25 per cent of them undertook a singular religious march to Winnipeg, which had finally to be interrupted by force; but a repetition of this kind of eccentricity is hardly expected. Comp. 'A Peculiar People, the Doukhobors', by *Aylmer Maude* (London, 1905) — Beyond *Swan River* our line now runs almost due N. About 20 M. to the E. of (124 M.) *Burch River* lies *Swan Lake*. 152 M. *Baden* and (161 M.) *Powell* are named after a British general who distinguished himself in the Boer War. We now enter *Saskatchewan* (p. 252) and run almost due W., passing several small stations. 302 M. *Melfort* (meal-station); 347 M. *Fenton*. — 364 M. *Prince Albert* (p. 253).

At (181 M.) *Gilbert Plains Junction* (see above) the Edmonton line diverges to the left from that to *Melfort* and runs towards the W. Most of the stations are unimportant. 208 M. *Grandview*. We enter *Saskatchewan* (p. 252) between (253 M.) *Makaroff* and (258 M.) *Togo*. At (279 M.) *Kamsack* we change from Central time to Mountain time. 336 M. *Invermay* lies on a small lake. 426 M. *Humboldt*, a divisional point; 478 M. *Aberdeen*. Near (485 M.) *Clarksboro* we cross the *Saskatchewan River*, and at (491 M.) *Warman* we intersect the *Qu'Appelle*, *Long Lake*, & *Saskatchewan Railway*. 572 M. *North Battleford*, a railway divisional point. — 658 M. *Lloydminster*, on the boundary between *Saskatchewan* and *Alberta* (p. 253), is the headquarters of the 'all-British' colony of H. B. Co. persons, established by the Rev. T. M. Barr in 1903. ~~Being taken by~~

to the S. is a depression covered with thousands of buffalo-bones. — Between (690 M.) *Vermilion* and (755 M.) *Vegreville* we pass *Birch Lake* (left). 775 M. *Hilliard*; 797 M. *Bruderheim*, a German settlement; 810 M. *Fort Saskatchewan*.

827 M. *Edmonton* (*Alberta Hotel*, \$2; *Windsor*, \$2; *Strathcona Ho.* \$1½-2, at *Strathcona*), the (provisional) capital of the new province of *Alberta* (see p. 253), the centre of a prosperous farming district, and an important focus of the fur-trade, is a progressive and prosperous little town on the N. bank of the *North Saskatchewan*. The population in 1901 was 2652, but it is now about 12,000, or, if we include the contiguous town of *Strathcona* or *South Edmonton* (p. 257), nearly 15,000. It contains several flour-mills, saw-mills, and brick-yards, a brewery, and numerous other industrial establishments. Besides being a station on the C. P. R. and C. N. R., it will also be one of the chief points on the Grand Trunk Pacific Railway across the continent (see p. 307). *Edmonton* was established as a post of the Hudson Bay Co. in 1795, and the picturesque stockaded *Fort* of the Company stands on a bold bluff above the town. The assessed value of the town in 1905 was \$6,000,000. Many of the buildings of the town are handsome and substantial. *Alberta College*, the most northerly college in America, is already attended by 200 students. Alluvial gold, with platinum, is found along the *North Saskatchewan* and its tributaries between *Edmonton* and the base of the *Rocky Mts.*; and coal also exists to a considerable extent in the valley to a point at least 50 M. above *Edmonton*. — To the E. of *Edmonton* rise the *Beaver Hills*, beyond which (25-30 M. distant) lies *Beaverhill Lake*, a fine sheet of water, 12 M. long and 6 M. wide, haunted by water-fowl. The land in the vicinity is well suited for farming and is being rapidly settled.

From *Edmonton* a road (railway in contemplation) leads to the N. for about 100 M. to a landing of the H. B. Co. on the *Athabasca River*. From this point navigation is kept up in summer by the large boats ('sturgeon boats') and flat-bottomed river-steamers of the H. B. Co., all the way to the *Arctic Ocean*, via the *Athabasca*, *Athabasca Lake* (185 M. long), the *Great Slave River*, the *Great Slave Lake* (340 M. long), and the *Mackenzie River* (1300 M. long). There are several points where portages are necessary, the longest (15 M.) being near *Fort Smith*, on the *Great Slave River*. The northernmost occupied post is *Fort McPherson*, on the *Mackenzie River*, about 80 M. from its mouth. This '*Great Lone Land*' is, of course, seldom visited except by fur-traders; but there are trading-posts and missions along the whole route just indicated, and the adventurous traveller, if supported by the good-will of the H. B. Co., would find few real hardships in making the whole or part of the trip. Close connection cannot be counted on; and without special arrangements the trip might consume most of a summer. Much of the region is quite suitable for agricultural settlement and may some day support a considerable population. — *Athabasca Landing* is also the starting-point of the route to *Little Slave Lake* and the *Peace River District*. The H. B. Co., steamer '*Peace River*' also plies up the *Peace River* from *Chepewyan* (p. 265) to *Hudson's Hope*, amid the *Rocky Mts.* — A trail is now being formed from *Athabasca* going across the *Rocky Mts.* to the *Yukon* (p. 293).
 Those who think of making either of the above excursions should consult the excellent 'Report on the *Peace River* and Tributaries in 1891',
 limited.

by *William Ogilvie*, published in the annual report of the Department of the Interior for 1892. Mr. Ogilvie gives the distances from Fort Smith onwards as follow: to *Fort Resolution*, on the Great Slave Lake, 190½ M; thence to *Fort Providence*, 167 M; thence to *Fort Simpson*, on the Mackenzie River, at the mouth of the *Liard*, 157½ M, thence to *Fort Wrangley*, 134 M; thence to *Fort Norman*, 180½ M; thence to *Fort Good Hope*, 169½ M; thence to *Fort McPherson*, 274½ M (in all 1273½ M). — Comp. the report of *Dr. G. M. Dawson* (Geol. Surv. Can., 1878-9) and the 'Report on an Exploration of the Yukon and Mackenzie Basins', by *Mr. R. G. McConnell* (Geol. Surv. Can., 1891). These contain good detailed maps. Reference may also be made to 'Sport and Travel in the Northland of Canada', by *David T. Hanbury* (New York, 1904; with a good map) and to the reports of *J. B. Tyrrell* and *James M. Bell* (Canadian Survey).

"It may be of general interest to the public to state how easily any one who is desirous of doing so can get beyond the Arctic Circle or into the Arctic Ocean if so minded. We will presume we are in Ottawa, and wish to visit the land of the midnight sun. Four days from Ottawa *via* the Canadian Pacific Railway we arrive at Calgary, one day from Calgary we arrive at Edmonton *via* the Calgary and Edmonton Railway. From Edmonton three to four days will be required to reach Athabasca Landing; this part of the route (about one hundred miles) has to be made with the aid of horses. By timing ourselves to reach Athabasca Landing about the first days of June, we will likely catch the steamer 'Athabasca' at the Landing, and go down to Grand Rapids on her. From Grand Rapids it will take us three or four days to reach McMurray, and if we are fortunate enough to catch the steamer 'Grahame' there, we will reach Chepewyan in a day. Another day will take us to Smith's Landing, and another to Smith; if we are fortunate at Smith's Landing we can get to Smith the same evening. If we meet the steamer 'Wright' at Smith, and she is bound for McPherson, for which she generally starts about the last days in June or the first days in July, we will likely reach McPherson in seven or eight days. The steamer has not heretofore gone farther down than the delta, but it is possible she may in the future go down to the Arctic coast and along it a short distance.

From the foregoing we see that even with the present facilities we can reach the Arctic Ocean from Ottawa in about twenty-three days, let us say to cover possible contingencies thirty days, and return in about forty. On the way we will pass through about 1200 miles of beautiful prairie country, which extends almost to Athabasca Landing; and from Athabasca Landing to the Arctic Ocean, upwards of 1800 miles, we have only ordinary river navigation, with the exception of a few miles on Lake Athabasca, and about 120 on Great Slave Lake. During the whole of the journey we are likely to experience as pleasant weather as if we had remained in Ottawa, and it may be pleasanter. We are likely to see much that will interest and surprise us, and we will certainly have a much clearer conception of the extent and value of our country. All the way to the Arctic coast we will see timber and plants similar to much we see here, and were it not for the absence of many of our trees, and the increased duration of daylight (which we will likely find at the coast to be of twenty-four hours duration each day) we would hardly realize that we had travelled upwards of 4000 miles from Ottawa, and been more than 1600 north of it. I cannot specify the cost of such a trip, but would place the maximum at about \$300. It is well to bear in mind that north of Edmonton the steamers have no regular date of sailing, their movements being governed by the Hudson's Bay Company's needs, and transport facilities over the other parts of the route, and it is possible that we might not even be able to make our way to the Arctic on the steamer; but there would be no great difficulty in completing our journey with such aid as the Hudson's Bay Company could place at our disposal, in which case our journey would partake more of the primitive style of travelling and be a more satisfactory experience to ourselves". (*Ogilvie*).

[In regard to the above quotation it should be noted that the H. B. Co. steamer on the upper Athabasca no longer runs, its place being taken by

'sturgeon boats' (p 261), and that the Roman Catholic Mission has also a small steamer plying from Fort Smith to the Lower Mackenzie. The intending traveller should communicate in advance with the H. B. Co.'s Commissioner at Winnipeg and with the Rev. Dr. E. J. Legat, Albert, Alta.]

The haunt of the wood-buffalo (*Bison Americanus*), which is now, however, extremely scarce, lies to the N. and W. of the Athabasca River, extending across the Peace River to the Liard. The musk-ox (*Ovibos moschatus*) and many caribou inhabit the 'Barren Grounds' to the N. of the Great Lake and E. of the Mackenzie. All these animals are, of course, out of season in summer, and the sportsman requires to stay in the district till late in autumn, when it is very difficult to return to civilization before the next spring. — The *Mackenzie River Museum*, organized at Fort Simpson by the H. B. Co.'s officers, contains an interesting collection of animals, fossils, etc., found in the country.

54. From Dunmore Junction to Lethbridge and Kootenay Landing.

394 M. CROW'S NEST BRANCH RAILWAY (C P R.) in 17¼ hrs. (fare \$ 15.95, to Lethbridge \$ 4.40; through fare to Nelson \$ 18.05, to Rossland \$ 20.45). This line runs nearly due W., the C P R. main line bending to the N.W. at Dunmore.

Dunmore Junction, see p. 255. At (16 M.) *Seven Persons* we cross the stream of that name. 31 M. *Winnifred*. At (47 M.) *Burdett* we are within 5 M. of the *South Saskatchewan*, which flows to the N. of the railway. A little farther up this stream is joined by the *Belly River*, the valley of which our line ascends. Between (64 M.) *Purple Springs* and (80 M.) *Woodpecker* we approach to within 2 M. of the river.

107 M. *Lethbridge* (2985 ft.; *Lethbridge Ho.*, *Dallas*, *Balmoral*, \$ 2; *U. S. Agent*), a thriving town with (1901) 2326 inhab., pleasantly situated on the Belly River, owes its prosperity to the fact that it is the centre of an important coal-region, supplying a large part of the consumption of coal in W. Canada. Large crops of various kinds are grown in the district by the aid of irrigation, the water for which is taken from the St. Mary's River (see below) and the Milk River (see below). The *Galt Hospital* is a well-equipped institution, and there are many other substantial buildings in the town. A little to the S. of Lethbridge lies the large *Reserve of the Blood Indians*, a branch of the Blackfeet.

FROM LETHBRIDGE TO SWEET GRASS (COUTTS), 66 M., *Alberta Railway* in 3½ hrs. (fare \$ 3.80). This line runs to the S.E. — 2 M. *Montana Junction*. — 19 M. *Stirling* is the junction of a line to *Cardston* (see below). — 34 M. *Tyrrell's Lake*; the station is about 3 M. from the lake of the same name. Beyond (42 M.) *Branton* we pass *Verdigris Lake* (l.), and at (53 M.) *Milk River* we cross the stream of that name. — At (66 M.) *Sweet Grass (Coutts)* we reach the U. S. frontier (*Montana*) and connect with the Great Northern Railway, which runs on viâ (89 M.) *Shelby* to (139 M.) *Great Falls* (205 M. from Lethbridge; through-fare \$ 9.20; comp. *Baedeker's United States*).

FROM STIRLING TO CARDSTON, 47 M., *Alberta Railway* in 2¼ hrs. (fare \$ 2.35). This line diverges to the right from that above described and runs to the S.W., following the course of the *St. Mary's River* (see above). — At (7 M.) *Raymond* there is a large beet-sugar factory, erected at a cost of \$ 500 000. — 18 M. *Magrath*; 29 M. *Spring Coulee*; 33 M. *Raley*. — 47 M. *Cardston*, on the St. Mary's River, is a thriving Mormon settlement, with about 1000 inhab., producing large quantities of sugar-beet (comp. above).

Beyond Lethbridge our railway crosses the wide and deep *St. Mary's Valley* by a series of trestle and truss bridges and runs through the *Macleod Ranching District*. From (126 M.) *Kipp* the Rocky Mts. are sometimes visible to the left. 143 M. *Macleod* (Rail. Restaurant), a divisional station (comp. p. 257). — We now ascend along the *Old Man River*. Fine views of the Rocky Mts. to the left. 163 M. *Brocket*. Before reaching (172 M.) *Pincher* we cross the *Pincher Creek* by a bridge 800 ft. long. This is a good sporting and fishing region. Some promising oil-fields have recently been discovered 45 M. to the S.W. of this point, near the international boundary. — 179 *Cowley*, on the S. branch of the Old Man River; 190 M. *Burmis*, with the pretty little falls of the *Middle Fork*. — We now pass through the *Gap* and reach (197 M.) *Frank* (Imperial, \$ 2), a new coal-mining settlement. In 1903 Frank was overwhelmed by an enormous land-slide from *Turtle Mt.* (4400 ft.) which wrecked some of the mines and caused a great loss of life. — We now penetrate the *Livingstone Range* of the *Rocky Mts.* by the *Crow's Nest Pass*. Fine scenery, with *Crow's Nest Mountain* (9000 ft.) rising to the N.W. The coal discovered in this district occurs in numerous and thick seams. Some of it makes excellent coke, which is of inestimable value to the smelters of the *Kootenay District* (p. 288). The train passes *Crow's Nest Lake* (4400 ft.) and then skirts *Island Lake* (4420 ft.), just beyond which, on the dividing line between Alberta and British Columbia, we reach the highest point of the railway (4450 ft.) and begin to descend on the other side along *Michel Creek*. Beyond (212 M.) *Crow's Nest* (4440 ft.) we pass through an amazingly contorted part of the railway, known as the *Loop*, where 3 M. of track are used to advance a distance of less than 200 ft. At (224 M.) *Michel* (3850 ft.) the line turns to the S. and begins to follow the valley of the foaming *Elko River*. 230 M. *Sparwood*; 248 M. *Fernie* (*Fernie*, \$ 2½; *King Edward*, *Waldorf*, \$ 2, 1410 inhab.). Near (266 M.) *Elko* (3080 ft.) we cross and leave the *Elko River*, which continues its course towards the S. while the railway bends to the W. Fine scenery. — 279 M. *Jaffray*. At (289 M.) *Wardner* (2485 ft.) the train crosses the *Kootenay River* (p. 288) by a fine truss-bridge with a swing-span of 170 ft. We then follow the W. bank of the *Kootenay* to (301 M.) *Fort Steele*. 311 M. *Cranbrook* (*Cranbrook*, from \$ 2; *Royal*, *Canadian*, \$ 1-2) is a thriving little divisional point and lumbering-town, with (1901) 1200 inhab. A branch-line runs hence to (19 M.) *Kimberly* (mines). — The railway now bends abruptly to the (left). 321 M. *Swansea* and (332 M.) *Moyie* (3046 ft.) both lie on the pretty little *Moyie Lake*. We thread a tunnel 450 ft. long. Beyond (352 M.) *Yahk* the line again turns to the W. and crosses the ridge (2860 ft.) of the *Purcell Range* of the *Selkirk Mts.* 366 M. *Kitchener*. We cross the deep cañon of the *Goat River* (view). 379 M. *Cheston*, 390 M. *Sirdar* (1800 ft.), on *Duck Lake*, frequented by large flocks of geese and ducks.

394 M. *Kootenay Landing* (p. 287). The railway is to be continued to (52 M.) *Nelson*, but at present communication with that point is maintained by steamers on Kootenay Lake (comp. p. 287).

55. From Banff to Vancouver.

560 M. CANADIAN PACIFIC RAILWAY in 26 hrs (fare \$22.40, sleeper \$6, tourist-car \$3). Through-trains and fares from *Halifax* and *Montreal*, see p. 230.

This section of the Canadian Pacific Railway has probably grander and more varied scenery to show than any equal length of railway in the world. There is not a dull or uninteresting minute all the way from Banff to Vancouver, while the daily service of trains in each direction is so arranged as to pass the least beautiful part at night. In the long days of summer, however, the early riser need not miss very much. In the season the wild flowers add greatly to the attractions. Observation-cars are attached to the trains. The traveller is strongly recommended to break this journey by stopping at least one night at *Laggan* (see below), one at *Field* (p. 271), and one at *Glacier House* (p. 274).

Banff, see p. 258. The train runs at first towards the W., with the winding *Bow* to the left and the *Vermilion Lakes* (p. 262) to the right. Fine retrospects. Ahead rise *Mt. Massive* and the other mountains enclosing *Simpson Pass*. We then turn to the right, and the ledge of *Pilot Mt.* (9130 ft.) becomes conspicuous in front (left). To the right is *Hole-in-the-Wall Mt.* (7500 ft.), showing an enormous cave roofed by a perfect arch. At (7 M.) *Sawback* (4475 ft.) we obtain a fine view of *Castle Mt.* (see below) on the right front. 17 M. *Castle Mountain Station* (4660 ft.) lies at the foot of *Castle Mt.* (8350 ft.), which towers to the right. To the left we now obtain, where openings in the woods allow, fine views of the grand *Bow Range*, including *Pilot Mt.* (see above), *Copper Mt.* (8500 ft.; these two behind us), *Mt. Deltaform* and others of the *Ten Peaks* (p. 270), and the imposing peak of **Mt. Temple* (p. 270). Near (25 M.) *Eldon* (4815 ft.) the whole range is in sight. To the right, beyond *Castle Mt.*, are the *Slate Mts.*, a fore-post of the *Sawback Range*.

35 M. *Laggan*† (5040 ft.), finely situated at the foot of *Mt. Fairview*, is the terminus of the *Western Division* and the beginning of the *Pacific Division* of the railway. A monument was erected here in 1906 to *Sir James Hector*, the discoverer of the *Hector* or *Kicking Horse Pass* (p. 271) in 1858. To the right opens the *Upper Valley of the Bow*, between *Mt. Hector* on the right and the *Waputik Mts.* to the left; and by looking up this gap, we see one of the first of the great glaciers visible from the railway, about 12 M. off and 1300 ft. above us. At *Laggan* the time changes from the 'Mountain' to the 'Pacific' standard (1 hr. behind; comp. p. xii).

† *Laggan* and the *Lakes in the Clouds* are included in the *Rocky Mts. Park* (p. 259).

Laggan is the station for a visit to the three LAKES IN THE CLOUDS, in the Bow Valley, an excursion which should not be missed except through dire necessity. Ponies and carriages meet the trains. A road (stage there and back \$1) leads to ($2\frac{3}{4}$ M.) ***Lake Louise** (5670 ft.), $1\frac{1}{2}$ M. long and $\frac{3}{4}$ M. wide, magnificently situated at the base of the stupendous glacier-clad *Mt. Victoria* (p. 270). At the N. end of the lake stands the large **LAKE LOUISE CHALET** (from \$3 $\frac{1}{2}$, meals \$1; telephone to Laggan), where fly-fishers and other visitors may obtain accommodation and camping-outfits (pony \$2 per day; to Mirror and Agnes Lakes \$1 $\frac{1}{2}$; guide \$2 & \$1 $\frac{1}{2}$). Swiss guides (p. 258) are also stationed here in summer for the use of mountaineers. One of the striking beauties of the lake is the various tints of green it shows in different lights and from different points of view. The brilliant wild flowers in the neighbourhood form another attraction. From Lake Louise we may walk or ride (2 M.) to *Mirror Lake* (so called from its wonderful reflections) or *Shadow Lake* (6400 ft.), and thence we may walk to *Agnes Lake* (ca. 6700 ft.). These lakes lie on the side of *Mt. Whyte* (see below), to the N.W. of Lake Louise. A fine cascade falls from Agnes Lake to Mirror Lake. All three lakes are often visited from Banff (p. 258). Lake Louise abounds in small trout, but there are no fish in the other lakes.

EXCURSIONS FROM LAKE LOUISE. A visit should be paid to the face of the stupendous **Victoria Glacier* and its tributary the *Lefroy Glacier*, 3 M. from the chalet and 650 ft. above it. A great part of the discharge of the glacier enters the lake under the débris of the moraine. A bridle-trail has been cut from the chalet round *Mt. Whyte*, on the W. side of Lake Louise, to (6 M.) the base of *Mt. Victoria* — A carriage-road runs from the chalet to *Moraine Lake* (6190 ft.), situated 9 M. to the S.E., at the base of the serrated range known as the *Ten Peaks* (see below). A camp has been established at *Moraine Lake* for the use of mountain-climbers — Midway between Lake Louise and *Moraine Lake* diverges a bridle-path, ascending *Paradise Valley* to the *Horseshoe Glacier*. From *Paradise Valley* a pass (8558 ft.) leads between *Pinnacle Mt.* and *Mt. Temple* to the *Valley of the Ten Peaks* (p. 268), while *Mitre Pass* (8300 ft.), between *Mt. Lefroy* and *Mt. Aberdeen*, leads to the W., via the *Lefroy Glacier*, to Lake Louise. — *Lake O'Hara* (p. 271) may also be reached via *Abbot Pass* (early start desirable). Good walkers may go on to *Hector* (p. 270) and return by railway. This is one of the grandest Alpine routes within easy access of a railway. It passes *Lake Oesa*, which is frozen for 11 months in the year. — One of the best short trips from Lake Louise is that to the *Saddleback* (ca. 7500 ft.; $1\frac{1}{2}$ -2 hrs.), which affords a superb **View of Mt. Temple*, with the tiny *Lake Annette* at its base. This excursion may be combined with the ascent of *Mt. Fairview* or *Saddle Mt.* (p. 270).

ASCENTS FROM LAKE LOUISE. *Whympers Camp* (2-3 hrs.), the name given to the N. end of the rock-wall connecting *Pope's Peak* with *Mt. Whyte*. From *Lake Agnes* (see above) we cross snow and moraine direct to the foot of the wall, whence a straight rock-climb leads to the col. A guide is necessary for the inexperienced, as occasional falling stones occur. From the top good rock-climbing leads to the summits of *Mt. Whyte* (10,365 ft.; 1-1 $\frac{1}{2}$ hr. from the camp), and *Pope's Peak* (ca. 9500 ft.; $\frac{1}{2}$ - $\frac{3}{4}$ hrs.), giving excellent practice-climbs. Beautiful views of the Lake in the Clouds and surrounding peaks. The *Devil's Thumb*, a spur of *Mt. Whyte* with a fine 'chimney', is also a good point of view.

Mt. Lefroy (11,290 ft.; 7-9 hrs) was first ascended in 1897 by *Messrs Norman Colthe, H. B. Dixon, C. E. Fay, A. Michael, H. C. Parker, C. L. Noyes*,

C. S. Thompson, and *J. R. Vanderlip*, with *Peter Sarbach*. The ascent, which should be undertaken only under favourable conditions, is one for experts only. After crossing Lake Louise, we follow the route to **Abbot Pass*, named after Philip S. Abbot, who was killed on the mountain in 1896. The early attempts were made up the S.W. face. Now the N. corner of the mountain is turned by an easy ledge, till the N.W. face is reached, which is then followed to the double-headed summit. Descent to the lake, 3-4 hrs.

Mt. Victoria (11,400 ft.; 7-9 hrs), was first ascended in 1897 by *Messrs. N. Collie, C. E. Fay*, and *A. Michael*, with *Peter Sarbach*. The route follows the crest of the Continental Divide for a long way and affords splendid views. The lower rocks near Abbot Pass are first scaled, demanding caution from their friable nature, till the snow-arête is reached; and this is followed for the rest of the journey. The pioneers took 8 hrs. from the chalet to the summit, and over 5 hrs. for the return; but times must vary greatly according to the condition of the snow.

**Mt. Temple* (11,637 ft.; 5-6 hrs), the highest peak in the district, was first ascended in 1891 by *Messrs. S. E. Allen, L. F. Frissell*, and *W. D. Wilcox*. A pack-horse and driver should be taken to the camp on *Moraine Lake* (p. 269) and an early start should be made thence to secure good condition of snow, if the day is clear. The ascent is made in the hollow of the E. face in a fairly straight line from the camp, with long scree and snow slopes and some moderate rocks, to a small couloir; thence the snow-arête is followed to the summit. Great care must be used in approaching the edge over *Paradise Valley* (p. 269) to the right, as it, like the summit, is always heavily corniced. The **View* from the top is one of the grandest in the Rockies, extending from *Mt. Assiniboine* to *Mt. Columbia*, with *Sir Donald* dominating the Selkirks in the W. Descent to camp easy (2-3 hrs).

The *Beehive* (7350 ft; 2 hrs; **View*) and *Mt. St. Piran* (8630 ft.; 2 hrs.) are ascended from *Agnes Lake*. — *Mt. Sheol* (ca. 9500 ft.), *Mt. Fairview*, *Saddle Mt* (ca. 8000 ft.), and *Mt. Aberdeen* (10,250 ft) may also be easily ascended by the skilled mountaineer.

The chief summits of the Ten Peaks range (p. 263) are *Hungabee* or the *Chieftain* (11,447 ft., first ascended by Prof. H. C. Parker, with C. and H. Kaufmann, in 1903), *Mt. Deltaform* (11,225 ft; first ascended by the same party, with Dr. Eggers, in 1903), and *Mt. Fay* (10,612 ft; first ascended in 1904 by Miss Benham, with Hans Kaufmann). Adjoining the last on the E. is the huge column of rock known as the *Tower of Babel* (7580 ft), at the E. base of which lies *Consolation Valley*.

The district to the N. of Laggan (*Upper Bow Valley*), beyond the railway, also offers much of interest and beauty, including *Mt. Hector* (11,205 ft; 7 hrs.; first ascended by Messrs. Abbot, Fay, and Thompson, without guides, in 1895), the fine *Hector Lake*, the beautiful *Bow Lake*, and the sources of the *North Saskatchewan*. *Mts. Columbia* (12,740 ft; the highest mountain hitherto climbed in Canada), *Forbes* (12,075 ft; the finest peak in the region), *Lyell* (11,460 ft.; the 'key-peak' of the region), and *Bryce* (11,685 ft; a difficult and dangerous climb) are among the grandest peaks in the Rocky Mts. The first ascents of all these were made in 1902 by Mr. Outram and C. Kaufmann, (with companions in the case of *Mt Forbes*). The great glacier of *Mt. Columbia* is 200 sq. M. in extent.

At Laggan we cross and leave the Bow and ascend to the left along a tributary named *Bath Creek*. The summit, marked by a rustic arch inscribed 'The Great Divide' and by a small lake (both to the left), is reached at (41 M.) *Stephen* (5320 ft.). We here enter *British Columbia* (p. 292). We then at once begin the abrupt descent, passing (43 M.) *Hector* (5207 ft.) and the *Wapta Lake*, just beyond which, to the right, at right angles to the line, is the long, sharp, brown ridge of *Mt. Oyden*, which the railway-men very appropriately call the *Broadaxe*.

From Hector a bridle-trail leads to the S., along the well-named *Cataract Stream* (about 10 min. up which is a curiously perched boulder, forming a sort of loophole through which part of the stream foams) to (8 M.) *O'Hara Lake*, which rivals Lake Louise in the grandeur of its Alpine scenery. — **Lake McArthur*, at the foot of *Mt. Biddle* (10,500 ft.), $1\frac{1}{2}$ hr. above *O'Hara Lake*, is fed by a glacier and is full of icebergs. The outlet is through an underground passage, into which the water is sucked in a kind of whirlpool.

The wild and beautiful **Kicking Horse* or *Hector Pass*, which we now enter, is traversed by the foaming *Kicking Horse River*, dashing far below us to the right, while to the left tower the *Cathedral Spires* (p. 272) and **Mt. Stephen* (p. 272; named after the first President of the C. P. R.), the latter one of the noblest summits in the Rocky Mts. To the right opens a magnificent **View of the Yoho Valley* (see below), flanked by huge glacier-studded mountains. As we proceed, a green hanging glacier, 500 ft. thick, is seen to the left, high up on the shoulder of *Mt. Stephen*. The works of a silver-mine are also seen on the side of *Mt. Stephen*, several hundred feet above us. We pass through a short tunnel. The gradient between *Stephen* and *Field* is so steep (1 : 22), that three large and powerful locomotives are often required to take an ordinary passenger train up the incline, while five are sometimes used on freight trains.

51 M. *Field* (4064 ft.; **Mt. Stephen House*, from \$ 3, meals 75 c.), a divisional railway-station on the left bank of the *Kicking Horse River*, closely hemmed in by lofty and imposing mountains. On the one side is *Mt. Stephen* (p. 272), on the other rise the massive *Mt. Field* (p. 272) and *Mt. Burgess* (p. 272). Looking down the pass, towards the S.W., we see the *Van Horne Range* to the right. *Field* is another important mountaineering centre, where ponies, equipments, and Swiss guides may be obtained. The hotel is well kept, and good fly-fishing may be had in the neighbourhood.

Excursions. Among the pleasantest of the shorter walks from *Field* are those to the **Natural Bridge* across the *Kicking Horse* and to the (2-3 hrs.) *Fossil Beds* on *Mt. Stephen* (p. 272). — The *Natural Bridge* road (practicable for driving) leads on to (5 M.) **Emerald Lake* (4220 ft.), at the foot of *Mt. Wapta* (p. 272), where a *Chalet Hotel* (from \$ 3) has been constructed by the C. P. R. to facilitate excursions in the *Yoho Valley* (see below), reached hence by the *Yoho Pass* (6000 ft). Trout-fishing may be enjoyed in the lake, while grouse and partridge abound in its vicinity. A Swiss guide is sometimes stationed at *Emerald Lake* in summer.

Another trail, beginning at the *Natural Bridge*, ascends the *Valley of the Amiskwi River*, between the *Van Horne Range* (S.W.) and the *President Range* (N.E.), to (25 M.) the summit of the *Amiskwi Pass*, which affords a fine view of *Mts. Forbes*, *Walker*, *Mummery*, and other giant peaks to the N., and also of the W. faces of *Mts. Baker*, *Collie*, and *Habel*. The *Amiskwi Falls* (800 ft.) are very striking. The pass connects with *Blaeberry Creek* and the old *House Pass*, used in the early fur-trading days. — **Yoho Valley*. This beautiful valley, with the environs of *Field*, has lately been made a national park, the E. boundary of which marches with the W. boundary of the Rocky Mts. Park (p. 259). It contains several camps and is traversed by a loop-trail (fine views), which runs high up on its W. side along the E. face of the *President Range* and returns along the winding *Yoho River* through the wooded floor of the valley. The most striking

points in the valley include the **Takakkaw Falls*, 1200 ft in height ($\frac{1}{2}$ day from Field); the *Twin Falls*, dropping vertically for 400 ft. and continued by a series of cascades (1 day from Field); the *Fall of the Waves*, between Mt. Gordon and Mt Balfour; and the *Laughing Falls*, seen from the lower trail. The trip may be continued to the tongue of the *Yoho Glacier*, at the head of the valley, amid snow-clad peaks, such as Mt Habel (p. 273), Mt. Collie (p. 273), and Mt Balfour (p. 273). A road is being made from Field to the Yoho Valley. — The *Hoodoos*, in the valley of the *Beaverfoot* (p. 273), between Mt. *Vaux* (p. 273) and the *Chancellor* (10,750 ft), may be reached from Field in $\frac{1}{2}$ day. They consist of conglomerate pillars, 80 ft. high, capped by immense boulders. The *Beaverfoot Valley* is a particularly good hunting-ground. — A good road (fine views) runs from Field to (8 M.) *Ottertail* along the base of *Mt Dennis* (see below) and in sight of the *Mt. Vaux Glaciers*.

ASCENTS. *Mt. Field* (8551 ft ; $3\frac{1}{2}$ -4 hrs) affords a good training climb. The route to Burgess Pass is followed to the N to the top of the col, whence the bridle-path is taken to the right until directly under the summit, which is reached by a straight climb in about 1 hr, first over grass slopes, then over tiresome screes, and finally over good but easy rocks. The *Views of Mt Stephen and the Cathedral, full in face across the Kicking Horse, and of the Yoho and Emerald Valleys on the N and S, are magnificent.

Mt. Wapta (9990 ft, 5-6 hrs) may be combined with *Mt. Field* (3 hrs. more) by following the snow-field that joins it with the summit of *Mt Field* till we reach the base of the rock-wall. *Messrs James Outram* and *J H. Scattergood*, with the guide *Christian Bohren*, who made the first ascent in 1901, forced a way straight up the face, a route for experts only. An easier way is found by skirting the base to a snow-bed in the hollow to the N.W., which leads over screes and then rocks, to the summit. The *View of the two valleys, the *Takakkaw Falls*, and the ice-field descending from *Mts. Daly* and *Niles* is very fine.

Mt. Burgess (9000 ft., $4\frac{1}{2}$ -5 $\frac{1}{2}$ hrs.) is ascended from the left end of Burgess Pass, and affords an unsurpassed view of *Emerald Valley* and *Lake*, at the foot of a huge perpendicular precipice. The return may be made down the steep slopes facing the Kicking Horse River.

Mt. Stephen (10,523 ft, 5-6 hrs, descent 3-4 hrs), first ascended in 1887 by *Mr. J J. McArthur*, is the favourite climb from Field. Though easy to an adept, it requires a steady head. We follow a marked path to the (2-3 hrs) *Fossil Beds* (interesting trilobites and crystals), and then follow the screes to the rocky arête that forms the sky-line as seen from the hotel. Here we obtain a sudden view into the grand amphitheatre to the right. The ridge of this is followed pretty continuously, with interesting rock-work and some giddy knife-edges and clefts, to the summit-snows and the three cairns. The *View is superb, with the *Selkirk Mts* (p. 273) to the W. and the immense snow-field marking the summit of the *Rockies* to the N. The *Ottertail Mts* (p. 273) and *Bow Range* (p. 268) are also well seen, while *Mt. Assiniboine* (p. 262) is a noteworthy object to the S.E.

The *Cathedral* (10,285 ft, 7-8 hrs), which towers above the railway to the N.E. of *Mt. Stephen*, was first ascended in 1901 by *Mr. James Outram*, with the Swiss guides *J. Bossonney* and *C. Klucker*. We follow the railroad to a point a little above the tunnel and then mount the slopes at the base of the *Cathedral Spires* (10,100 ft; p. 271) to the N.W. ridge. We next traverse screes at the base of the *Spires* to the last couloir before the precipices of the main peak. The couloir leads to the little col on the ridge connecting the *Spires* with the main peak. Hence the route leads to the right, and the summit is reached by steep snow and rocks. It is possible to combine the ascent of the *Spires* with the *Cathedral* in one long day, but both are for experts only, with good guides. A longer but easy route ascends from *Hector station* (p. 270) up the E. slopes to the col.

Mts. Duchesnay, Dennis, and *Odaray* are among the numerous minor peaks that may be climbed from Field, without the need of sleeping out even for a single night. — *Mt. King* or *Carnarvon* (9350 ft), one of the highest of the *Van Horne Range* (p. 271), also commands a splendid view and may be ascended from Field in 7-8 hrs.

The following peaks are ascended from the upper part of the *Yoho Valley* (comp. p. 271) — *Mt. Habel* (10,600 ft., 6 hrs., descent 5 hrs.) The route followed by Messrs. *Edward Whymper* and *Outram* in 1901 led through trees and up the glacier to the col (ca. 8700 ft.) to the N. E. of *Insulated Peak* (9800 ft.), then over snow to the rocks of *Mt. Habel*, then up the glacier on the S. side, and finally over easy rocks and snow. Extensive panorama, especially to the N. and N. W. — *Mt. Collie* (10,500 ft.; 6½ hrs., descent 4¼ hrs.), first ascended by the same party on Aug. 19th, 1901, commands a similar view. — The *Trolltinderne* (9600 ft.), so called from their fancied resemblance to the Norwegian peaks of that name, took the same party 1½ hrs (return 2½ hrs.) and afford a fine view of *Mt. Balfour*. — Other first ascents made in this district by Mr. *Outram* in 1901 were *Kwetchuk Peak* (9600 ft., 3 hrs. from camp), the *President* (ca. 10,200 ft.; 3 hrs.; good views), and *Angle Peak* (ca. 9800 ft.; 3 hrs.). Mr. *Outram* was also the first to traverse *Balfour Pass* (ca. 8400 ft.), a fine glacier-pass, leading from *Yoho Valley*, between *Mts. Balfour* and *Hector*, to *Hector Lake* and the *Bow Valley* (p. 269). — *Mt. Mummery* (ca. 10,800 ft.), about 12 M. to the N. W. of *Mt. Habel*, above the *Blæberry Pass* (p. 271), was first ascended on Aug. 10th, 1906, by Messrs. *R. Walcott*, *W. R. Peabody*, and *S. Cabot*, with *C. Kauffmann* and *G. Feuz*. It commands a splendid distant view of the *Selkirk Range*. None of these ascents should be attempted alone or by novices.

Beyond *Field* the line continues to descend through the valley of the *Kicking Horse*. To the right opens the *Amiskwi Valley* (p. 271). We then cross the *Ottertail* ('View) and reach (59 M.) *Ottertail* (3695 ft.). The most prominent summits of the *Van Horne Mts.* (r.) are *Mt. Selwyn* and *Mt. King*. To the left are the *Ottertail Mts.*, culminating in *Mt. Goodsir* (11,660 ft.; first ascended by Prof. *Fay* and Prof. *Parker*, with *Hasler* and *C. Kaufmann*, in 1903) and the glacier-scarred *Mt. Vaux* (10,850 ft.; first ascended by Messrs. *Outram*, *Fay*, and *Scattergood*, with *Hasler*, in 1901). Fine retrospects. To the left (E.), opposite (66 M.) *Leancoil* (3580 ft.), towers the precipitous *Chancellor Peak* (10,780 ft.; first ascended by Messrs. *Outram*, *Scattergood*, and *Weed*, with *Hasler*, in 1901), near the junction of the *Beaverfoot* with the *Kicking Horse*. The line turns abruptly to the right (N.), round *Mt. Hunter*, and descends the **Lower Cañon of the Kicking Horse* which also turns to the N. To the S. is the *Beaverfoot Range*. The train passes repeatedly back and forward over the whirling torrent and at places breaks through the angles of the lofty hemming cliffs by short tunnels. The finest part of this wonderful echoing cañon is the lower end, near the mining town of (86 M.) *Golden* (2580 ft.; *Columbia*, *Kootenay*, *Queen*, \$ 2), with 600 inhab., situated at the point where the *Kicking Horse* enters the *Columbia*.

Steamers ply twice weekly in summer from *Golden* to (ca. 100 M.) *Windermere* and *Adela*, on the *Upper Columbia*, where they connect by tramway with another steamer plying on *Upper Columbia Lake* to *Thunder Hill* and *Canal Flat*. Here we connect (tramway) with yet another boat ascending the *Kootenay River* to *Fort Steele* (see p. 267).

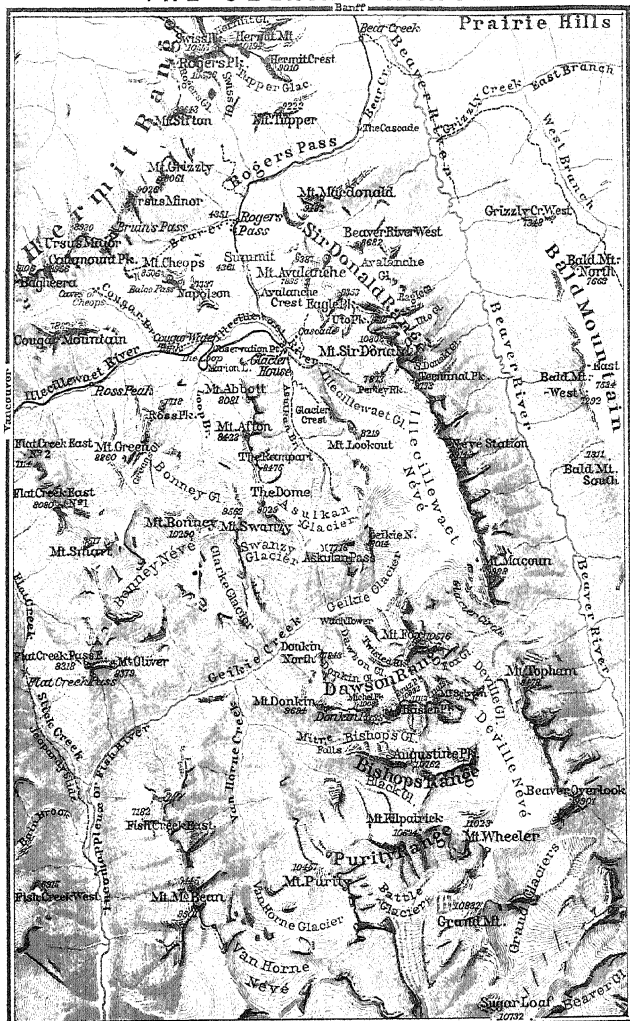
Our line turns abruptly to the right (N.) and descends the open valley of the *Columbia*, here dividing the *Rocky Mts.*, on the right, from the **Selkirk Mts.*, the fine outlines of which now rise to the left. The light-green stripes mark the paths of avalanches (comp. p. 296). 93 M. *Moberley* (2545 ft.). Several saw-mills are passed.

103 M. *Donald* (2580 ft.), once of importance as a C. P. R. divisional point, is now almost deserted†.

Beyond Donald we cross the Columbia and thread a narrow rocky *Gorge, with the river flowing furiously to our right. Emerging from this ravine at (115 M.) *Beavermouth* (2435 ft.), we turn abruptly to the left (S.), quit the Columbia, pass through the **Beaver Gate*, and ascend rapidly on the left bank of the impetuous *Beaver River*. The strata are at right angles to the course of the stream and absolutely vertical. Most of the gigantic trees with which the hills on the opposite bank were clothed have been burned. At (119 M.) *Six-Mile Creek* (2617 ft.), at the bridge over the *Mountain Creek*, 21½ M. beyond, and from a lofty bridge over a foaming cascade still farther on, we have good views of several peaks of the Selkirk Range, dominated by the Matterhorn-like *Sir Donald* (p. 277). Numerous side-torrents are crossed, including the *Stony Creek* (3500 ft.), spanned by a fine steel-arch truss-bridge, 336 ft. in span and 295 ft. high. At (129 M.) *Bear Creek* (3673 ft.) we leave the Beaver, here nearly 1000 ft. below us, and ascend to the right through the wooded gorge of the Bear Creek (gradient 1 : 45). Beyond this point the line is enclosed by the mighty walls of *Mt. Tupper* (9222 ft., p. 278), with its bold crags, on the right, and *Mt. Macdonald* (9482 ft.), on the left; but the snow-sheds (with a total length of 6 M.) are so continuous that glimpses only can be had of the fine scenery. — 136 M. *Rogers Pass* (4351 ft.), named in honour of Major Rogers, the American engineer who in 1881 discovered the only feasible pass across the Selkirks. The pass, with its wonderful mountain-scenery, has been reserved as a National Park. The second-highest peak to the N. at this point (Rogers Peak, 10,536 ft.) has been named *Swiss Peak* (10,515 ft.), in honour of Mr. Carl Sulzer of the Swiss Alpine Club, who made the first ascent in 1890. Passengers for Glacier House might leave the train here and walk the rest of the way (4 M.) down the track (comp. p. 276). — At (137 M.) *Selkirk Summit* (4361 ft.) we reach the top of the pass and begin the descent on the other side, where an additional summer-track obviates the tantalizing loss of opportunities caused by the snow-sheds. To the right towers the vast pyramid of *Mt. Cheops* (p. 277); to the left, *Avalanche Mt.* (9387 ft.); in front rises *Ross Peak* (7718 ft.; first ascent, 1896), with a large glacier on its E. slope. We now overlook the deep valley of the *Illecillewaet* ('ilysillywat'), into which the train descends over lofty bridges and through a series of wonderful loops and curves. The *Illecillewaet Glacier* (p. 275) comes into view on the left front. 139 M. *Glacier House* (4095 ft.), where a halt is made for dinner by the trains in each direction, is a well-kept and recently much enlarged hotel (from \$ 3½, meals \$1), magnificently situated in the heart of the Selkirks, near the foot of the Illecillewaet Glacier.

† An interesting account of the engineering difficulties of the railway from Donald to Revelstoke is given in Mr. Wheeler's book (p. 275).

THE SELKIRK RANGE



From Surveys by Arthur O. Wheeler, E.R.G.S.

Geogr. Inst. Wagner & Debes, Leipzig.

0 1:250,000 0 2 4
Kilometers Miles

Every traveller should spend at least one day here; and the lover of fine scenery and the mountain-climber will find strong inducements to prolong their stay. Swiss guides (see p. 258) and all requisites for mountain-climbing may be obtained here. Immediately opposite the hotel is a pretty *Cascade*, descending from a height of about 1200 ft through the trees on the lower part of *Avalanche Crest*. To the right of this rise *Eagle Peak* (p. 278) and *Sir Donald* (see p. 277), while farther to the right is the Glacier. To the left, as we stand with our backs to the hotel, is *Mt Cheops*, and to the right of this is the fine *Hermit Range*. Behind the hotel is the heavily-timbered *Mt. Abbott*. *Ross Peak* (p. 274) is not visible. The annual snow-fall at the Glacier House averages 35 ft. The beautiful yellow *Erythronium giganteum* is often found at Glacier, shooting its leaves through the snow.

The *Selkirk Range† occupies the region enclosed between the great loop of the *Columbia* and the *Kootenay River* and is composed of a complexity of minor ranges enclosing deep forest-clad valleys and rising to rugged peaks adorned by silvery white snow-fields and glaciers. The forests, owing to the greater moisture deposited on the Selkirk Range, are more luxuriant than those in the Rockies, and for a similar reason the snow-fields and glaciers are more extensive. The scenery, consequently, is superb, and as the mountains are not of such stupendous magnitude as to preclude exploration by the ordinary tourist there are few regions in the world where the lover of the picturesque can make more delightful excursions. At the same time, there are peaks to be scaled and glaciers to be traversed which will call forth the best abilities of the mountaineer. The patient and persevering sportsman may get bears and wild goats. The artist and the botanist have a magnificent field to work in, and the climate is unsurpassed of its kind.

The fine *Illecillewaet Glacier will no doubt be the first object aimed at on arrival at Glacier House. About $1\frac{1}{2}$ hr. will suffice for a walk along the well-made track from the hotel to the foot of the glacier. The path (sign-posts at doubtful points) leads to the right (S.) and crosses the stream from the *Asulkan Valley*. It then traverses the scene of an enormous avalanche, of the force of which a lively idea is obtained from the manner in which huge trees have been overthrown, tossed about, and piled up one upon another. Farther on we cross the glacier-torrent, follow its right bank, and soon leave the shade of the forest. The path now forks. The branch to the right leads across the shingle-flats to the lower end of the glacier, where the stream may be seen issuing from the ice-cave. Caution should be exercised here, as during the heat of the day stones detached by the melting of the ice often roll down the glacier and fall off at its lower end. In Switzerland several fatal accidents have occurred by persons having been struck by such stones. The form of the cave is constantly changing, owing to blocks of ice falling from its roof. It is, therefore, unsafe to enter a glacier-cave except one artificially made, as is sometimes done in the more solid portion of the glacier. The 'snout' of the glacier is slowly but steadily receding — Returning to the point where the path forked we may make a prolonged excursion up the moun-

† The following sketch of excursions among the Selkirk Mts. was originally prepared for the first edition of this Handbook by the Rev. William Spotswood Green, author of 'Among the Selkirk Glaciers' (1888), but has since been considerably expanded with the aid of Mr. A O Wheeler, Mr. W. S. Jackson (p. 259), and other mountain-climbers. The admirable work by Mr. Wheeler, entitled 'The Selkirk Range' and published by the Dominion Government (1905 6; illus. and with excellent maps), should be consulted by everyone interested in the district.

tain-side, above the glacier. The path ascends through alder-scrub and banks rich in wild-flowers, and commands fine *Views of the glacier-filled valley. An afternoon may thus be spent, without much fatigue, in the midst of the grandest scenery. The circle of mountain peaks, which, with immense precipices, curtail the outlook from Glacier House, will attract deep interest. On the side of the Illecillewaet valley are Mt. Cheops and the Hermit Range; on the N. and E. Avalanche Mt., Eagle Peak, and Mt. Sir Donald rise in great magnificence. The white snow-field or névé of the Illecillewaet Glacier forms the sky-line to the E.

A well-made and easy trail, beginning at the back of the hotel, ascends through dense forest and over flowery slopes of green to (1 hr.) **Marion Lake* (5665 ft.), a placid little tarn on the N. face of Mt. Abbott, reflecting the forest and mountain-peaks to perfection. A path indicated by a board to the right ascends hence to (5 min.) **Observation Point* (5750 ft.), the view from which, one of the most noteworthy accessible to ordinary tourists, includes Sir Donald, the gleaming Illecillewaet far below, Rogers Pass Village (near the head of the pass), and the serrated, snow-clad, glacier-hung Hermit Range, meeting the sky-line on the N.

A good bridle-trail has been constructed to the top of the timber-line on Avalanche Mt. (9337 ft.) and to the foot of the final rocky cone. The top is reached from the Glacier House in 6 hrs. (return 3 hrs.) and commands a splendid *View, including at least 100 glaciers. On this trail is a summer-house affording a good view of the Cascade (p. 275).

An easy and pleasant walk may be taken along the railway-track to (2 M.) *Selkirk Summit* and (2 M.) *Rogers Pass*. We may ascend to the roof of the long snow-shed just beyond the first bridge and follow it to the other end. The *Views all the way are superb — The walk down the track to see the **Loop* (see p. 279) is also recommended.

The following five excursions may be made in one day each by fairly good walkers making an early start.

1. ASCENT OF MT. ABBOTT (3½-5 hrs.) No single excursion gives recently arrived visitor such an intimate acquaintance with the district as this. From the hotel to (1 hr.) *Marion Lake*, see above. The path now leads to the left, along the shore of the lake. The mountain rises to a long rocky ridge in steep precipices, up which, however, there are several practicable lines of ascent. The easiest will be found by bearing away to the right. On striking the ridge it may be followed along to the S. The *View from the top of Mt. Abbott (8081 ft.) is a complete panorama of the surrounding peaks, including Mt. Bonney, rising from its glacier to the S.W., Sir Donald to the E., and the peaks of the Dawson Range, showing over the nearer glacier-clad ranges to the S. To the N., 4000 ft. below us, is the deep ravine through which the Illecillewaet river winds.

2. GREAT SNOW-FIELD OF THE ILLECILLEWAET GLACIER. This expedition should not be undertaken by those quite unacquainted with the dangers of glacier-travel unless under proper guidance. The ascent is made along the path leading to the glacier and continued up the steep moraine on the right bank of the ice-fall. As we approach the mountain-spur coming down from the direction of Sir Donald some few steps may have to be cut if the snow is not in good order for walking, but in 4-5 hrs. from the hotel the upper snow is reached at *Perley Rock*, and by avoiding the crevasses which exist we may cross its undulating surface and from any of the small eminences which bound it on the E. obtain a magnificent *View of the Dawson Range, the Prairie Hills, and Bald Mt. beyond Beaver River. Ample time should be allowed for the return-journey, as the snow-slopes may require more care in the afternoon than in the morning, and it would not do to get benighted amongst the boulders of the moraine.

3. THE ASULKAN PASS. The valley leading to this pass is one of the gems of the district and is reached from the hotel by a good bridle-path. The path (no guide necessary to the foot of the glacier), after traversing a forest-clad ravine and crossing the river more than once, enters a wide amphitheatre, where grassy levels, sombre forests, and precipices down which innumerable sparkling cascades plunge from the snow-slopes and glaciers above, combine to form a perfect fairy-land of beauty. At the

upper end of the valley the track climbs a steep mountain-spur, and leaving the forest the traveller is confronted by the high moraine of the 'Asulkan Glacier. Marmots abound, and their shrill cries of alarm may be heard on all sides. Flowers such as the bright red *Castilleja minima* give brilliance to the scant vegetation, which disappears altogether ere the ice is reached. The glacier must now be crossed, dangerous crevasses avoided, and the ascent continued to the 'Asulkan Pass (7716 ft.). The *Dawson Range*, with *Mts. Fox* and *Donkin* as outliers, is immediately in front. The *Geikie Glacier*, the main source of the large *Incomappleux* or *Fish River*, fills the deep ravine below. Mountain-goats may be met with on the slopes on the S. side of the pass. Those who are not prepared to camp out for the night must turn here, the whole expedition (to this point and back) taking 10 12 hrs.

4 CAVES OF CHEOPS. A bridle-path leads to the W. from the Glacier House to (4 M.) the *Cougar Brook Water Tank*, and then up the *Cougar Valley* to the (2 M.) *Caves of Cheops, or *Deutschman's Caves*, situated at the foot of *Mt. Cheops* (8503 ft) and formed by the underground passage of the Cougar Brook through a ridge of dark blue limestone. About 1 M. of passages has been explored. The walls are often covered with a florescent deposit of carbonate of lime resembling the heads of cauliflower. Beautiful effects are produced by lighting up some of the chambers, and the roar of Cougar Brook and the subterranean falls is very impressive. Among the chief points are *Avernus*, with a waterfall; a funnel of solid rock rising to a height of 120 ft.; the *Pit*, with a slab bearing a cross, perfect as if cut by a chisel; the *Corkscrew*, the *Goat Falls*, and the *Bridal Chamber*. — The upper valley of the Cougar Brook, just beyond the caves, affords splendid mountain-views. It abounds in lovely wild flowers and harbours numerous marmots, gophers, and little chief hares or pikas (*Lagomys princeps*). — There is a log-hut at the Caves, where the night may be spent when necessary.

5 BEAR CREEK, flowing through the Rogers Pass Valley, at the S base of the Hermit Range. The beautiful valley of this stream (3 M. from the Glacier House) is now traversed by a bridle-path, constructed to facilitate the ascent of *Mt. Grizzly* (9061 ft., first ascended in 1905 by *Rev. J. E. Bushnell* and *Dr. A. Eggers*). This trip may be easily combined with the last by passing the night in the above-mentioned log-hut.

The higher mountain-peaks of this range must be attempted only by those who have had considerable experience in mountain-climbing.

MT. SIR DONALD. On July 26th, 1890, the first ascent of **Mt. Sir Donald* (10,808 ft) was accomplished by *Messrs. Huber* and *Sulzer*, of the Swiss Alpine Club, accompanied by a packer from Donald named *Cooper*. They started from a camp below the cliffs of the mountain facing Glacier Crest, and, ascending by the small glacier to the S. W. of the peak, crossed over to the S. E. ridge of the mountain, by which they reached the summit in 7 hrs. from their camp. The descent took much longer. The second ascent was not made till nine years later, but it has since been made several times, on four occasions by ladies (*Mrs. Berens*, *Miss Raymond*, *Miss Benham*, and *Miss Tuzo*). In 1903 it was ascended by *Herr E. Tewes* of Bremen, with the guides *Feuz* and *Bohren*, via the N. arête (8 hrs.; very difficult). The usual route follows the left bank of the *Illecillewaet* to the foot of the moraine, which rises in a perfect ridge to the glacier; the latter is considerably cut up into more or less concealed crevasses. Access to the rocks is best obtained by the patch of snow immediately under the little point on the sky-line, formerly known as *Green's Peak*, after the *Rev. William Green* (p 275), who was beaten here in his attempt on the mountain. A tunnel is constantly found here, which leads at once to easy rocks. If this cannot be reached, a way across the bergschrund must be sought to the right, necessitating some awkward scrambling along a perpendicular rock-face. In the hollow of the mountain where it joins this ridge, stones are perpetually falling from the overhanging cliff, demanding great caution. The ascent is completed by the ridges on the face fronting the hotel to the arête, a short distance from the summit. The rocks on the face are apt to be badly glazed. A knife-edge with sheer

precipices on either side connects the true summit with the one visible from the hotel. The descent by the same route and return may take 4-6 hrs. — None but experts, with good guides, should attempt Sir Donald. The climber may be watched for almost the whole way through the big telescope at the Glacier House.

Mr. BONNEY. This mountain was climbed for the first time on Aug. 9th, 1888, by the *Rev. Wm. S. Green* and the *Rev. Henry Swanzy*, and for the second time on Sept 2nd, 1901, by *Miss Henrietta Tuzo*. After a preliminary reconnaissance on the 7th, the ascent was made from the valley opening at 'The Loop' by the first small glacier (now called *Green's Glacier*) descending from *Mt. Green* (8860 ft.). The chief difficulty in the ascent was climbing a sharp peak to the N.W. of the main summit, which had to be traversed ere the summit of *Mt. Bonney* (10,290 ft.) could be reached. From a camp near the head of the valley the ascent and descent occupied about 18 hrs., including an hour spent on the summit.

Rogers Peak (10,536 ft.) was first ascended in 1896 by *Messrs. Abbot, Little, and Thompson*, from the station at Rogers Pass. It is connected by a rocky arête with *Swiss Peak* (10,515 ft.; p. 274). — The amphitheatre below Rogers Peak (reached from Glacier House in 3-4 hrs. by a good bridle-path) shows excellent examples of glacial striation. At the timber-line is a cabin, built to facilitate the ascent of the adjoining peaks — The huge mass of *Mt. Tupper* (9222 ft.), forming the other extremity of the Swiss Range, was ascended for the first time by *Mr. Wolfgang Koehler* of Leipzig (Germany), with *E. and G. Feuz*, in the summer of 1906.

Mt. Bagheera (9096 ft.), the westernmost of two lofty peaks on the N. side of the head of Cougar Brook, the massif on the N. side of Cougar Valley, was first climbed by *Mr. A. O. Wheeler* in 1902. The peak is reached by mounting the snow-slopes directly be'ow the notch that separates Bagheera from *Catamount Peak*. A fine bed of red snow (caused by the presence of the tiny plant, *Protococcus nivalis*) was found here. Thence easy rocks lead to the arête, which is followed to the summit, traversing the low E. peak. The descent may be made straight down the precipitous rock-face to the foot, giving some sporting climbing, with firm rocks. Fine view from the summit, especially of the section usually hidden by the Swiss Range. It is best to camp the night before at the wonderful *Caves of Cheops* (p. 277), combining the two expeditions.

Mt. Macdonald (9482 ft.; 8-9 hrs.), forming the S. wall of Rogers Pass, is ascended from Rogers Pass Station (p. 274) through a deep couloir, over three snow-slopes, and up an easy arête.

Mt. Dawson (two peaks, *Mt. Hasler*, 11,113 ft., *Mt. Feuz* 10,982 ft.; 5-6 hrs.), first ascended by *Professors Fay and Parker* in 1899 and by *Miss Gertrude Benham* in 1904. The ascent is begun at the camp near the Dawson Glacier, the left moraine of which is followed to the Dawson Amphitheatre. We scale the end-wall of this, just to the N.W. of which is the *Twisted Rock*, a curious example of contorted strata, about 1000 ft. in height. We next bear to the right, over névé, to the E. arête, leading to the summit. The View is very extensive.

Mt. Selwyn, formerly named *Mt. Deville* (11,013 ft., 5-6 hrs.), first climbed by *Messrs. Topham and Forster* in 1890, rises just to the E. of Mt. Dawson, and is ascended from the above-mentioned camp. The route for the most part is the same as that for Mt. Dawson, but, instead of turning to the right, we keep straight on to the ridge connecting the two mountains. We then descend a steep snow-slope to the foot of the peak of Mt. Selwyn, whence the summit is gained without much trouble. The view is fine.

Mt. Donkin (9694 ft.; 3-4 hrs) at the W. end of the Dawson Range, is scaled with comparative ease from the Donkin Pass, and commands a splendid view, including Mt. Purity and the Bishops' Range — *Mts. Purity, Fox, and Sugar Loaf* (10,732 ft.) were also first climbed by *Messrs. Topham and Forster* in 1890. This region was reached by following the Prairie Hills to the E. of Beaver River and striking into the main range far to the S. — **Glacier Crest* (7420 ft.; 1/2 day) commands a close and magnificent view of the Illecillewaet and Asulkan glaciers.

Among other good ascents to be made from the Glacier House are

Mt Afton (8423 ft.), *Castor and Pollux* (9108 ft. & 9176 ft.), the *Rampart* (8476 ft.), the *Dome* (9029 ft.), *Eagle Peak* (9353 ft.), *Uto Peak* (9810 ft.), and *Mt Swanzy* (9562 ft.). Though the average height is lower than in the Rockies proper, these hills, as a rule, have firmer and more reliable rocks and give excellent training for the climber.

Besides the expeditions which may be made in the section of country through which the railway runs, other portions of the Selkirk range may be entered by ascending the Columbia by the steamer from *Golden* (p. 273) and working up any of the valleys which drain towards the headwaters of the Columbia or Kootenay. For hunting purposes these routes will probably be the best, but the difficulty in the way of reaching the higher portions of the range will be much greater, except in the *Spill-macheen Valley*, up which a bridle-trail now leads to a mine.

Continuing the descent from the *Glacier House*, we soon reach the ***Loop**, 'where the line makes several startling turns and twists, first crossing a valley leading down from the *Mt. Bonney* glacier, touching for a moment on the base of *Ross Peak*, then doubling back to the right a mile or more upon itself to within a biscuit's-toss; then sweeping around to the left, touching *Cougar Mt.*, on the other side of the *Illecillewaet*, crossing again to the left, and at last shooting down the valley parallel with its former course. Looking back, the railway is seen cutting two long gashes, one above the other, on the mountain-slope, and farther to the left, and high above the long snow-shed, the summit range, near *Rogers Pass*, is yet visible, with *Sir Donald* overlooking all'. — The *Illecillewaet* is a slender mountain-torrent, foaming over its rocky bed, first on one side and then on the other. The water is at first a dull green from the glacial mud, but it becomes much clearer as it descends. Beyond (146 M.) *Ross Peak Siding* (3155 ft.) we reach a long tunnel-like snow-shed. At (154 M.) *Illecillewaet* (2710 ft.) are several silver-mines. About 5 M. farther on we look down, on the right, into the depths of the **Albert Cañon*, where the *Illecillewaet* foams through a 'flume' 20 ft. wide and 150 ft. below us. At (161 M.) *Albert Cañon Station* (2225 ft.) an extra-engine is put on to push east-bound trains up the ascent. 171 M. *Twin Butte* (1905 ft.) takes its name from the huge double summit to the left, now named *Mt. Mackenzie* (8065 ft.). The line has here gained the level of the river. To the right towers the fine peak of *Clachnacudann* (8675 ft.), named after the famous 'stone of the tubs' at Inverness (see *Baedeker's Great Britain*). The valley contracts once more to a narrow gorge, or 'box-cañon', through which there is barely room for the river and railway to pass side by side, and expands again as the *Illecillewaet* nears its end in the Columbia.

182 M. **Revelstoke** (1500 ft.; **Hotel Revelstoke*, near the rail. station, from \$ 3; *Victoria*, \$ 2½-3; *Union*, \$ 1½-2; *Central*, \$ 2; *Columbia*, \$ 1-1½), a divisional station, lies on the left bank of the Columbia, which has made a wide circuit round the N. end of the Selkirks, and here rejoins the railway, 1090 ft. lower than at *Donald* (p. 274) and much wider. The town, with (1901) 3003 inhab., carries on a considerable supply-trade with the mining districts of the Columbia, both to the N. and S. (comp. pp. 287, 288), and has a large smelter.

Revelstoke is a good centre for shooting, fishing, and other excursions. Among the nearer points of interest are the **Illecillewaet Cañon* (2½ M.), *Williamson's Lake* (4 M.), *Silver Tip Falls* (8 M.), *Eagle Pass* (W.), **Jordan Pass* (N W.), *Mt. Clachnacudainn* (p 219), and *Mt. Mickenzie* (p 279). Information is willingly given by the *Tourist Association*.

From Revelstoke to Robson, Nelson, and the *Kootenay District*, see R 56.

Leaving Revelstoke, we now cross the Columbia, here about 300 yds. wide. *Mt. Begbie* (8835 ft.), rising to the left, is the loftiest summit of the **Gold or Columbia Range**, the third of the four great parallel mountain-ranges in the Cordilleran section of Canada. The *Eagle Pass*, which we enter at once, affords an easy passage across this range, forming a striking contrast to the enormous difficulties that had to be overcome in crossing the Rockies and the Selkirks. The summit is reached near (190 M.) *Clanwilliam* (1830 ft.), only 330 ft. above Revelstoke. Four picturesque lakes, *Summit* (1805 ft.), *Victoria*, *Three Valley* (1630 ft.), and *Griffin*, here occupy the floor of the valley and force the railway to hew a path for itself out of the mountain-side. The valley is covered with spruce, hemlock, cedar, Douglas fir, and other large trees. From Griffin Lake issues the *Eagle River*, along which we now descend. At (210 M.) *Oragellachie* (1230 ft.) the last spike of the C.P.R. was driven on Nov. 7th, 1885, the rails from the E. and W. meeting here. We cross an arm of *Shuswap Lake*.

217 M. **Sicamous Junction** (1155 ft.; **Hotel Sicamous*, owned by the C. P. R., from \$3, often full), a small town named from an Indian word meaning the 'Narrows'. It lies on the ***Great Shuswap Lake**, a singular body of water lying among the mountain-ridges like a huge octopus, sending off long narrow arms in all directions. The coastline exceeds 200 M. in length. Sicamous is one of the finest sporting centres in Canada, the objects of the chase including caribou and deer. The fishing is excellent. The Shuswap Indians occupy a reservation to the W. of the lake (see p 281).

FROM SICAMOUS JUNCTION TO OKANAGAN LANDING, 51 M., *Can. Pac. Railway* in 3 hrs (fare \$2.05). — This line runs to the S., first along *Lake Mara* and then up the *Shuswap River*, traversing a district known, from its fertility, as the 'Garden of British Columbia'. It is occupied by farmers and ranchmen and affords excellent deer-shooting. At (23 M.) *Enderby* we quit the Shuswap. 32 M. *Armstrong* (500 inhab.) is another thriving little market-town. Near (46 M.) *Vernon* (Kalamalka, \$2½-3; Coldstream, \$1-2), the chief distributing centre, is a huge farm (13,000 acres) belonging to Lord Aberdeen, with magnificent orchards and large quantities of horses, cattle, sheep, and poultry. The present terminus of the railway is at (51 M.) *Okanagan Landing*, at the head of *Okanagan Lake* (1130 ft.), a narrow sheet of water 70 M. long and about 3 M. wide. Steamers ply hence thrice weekly to *Kelowna*, *Peachland* (Miller's, \$2), *Summerland* (Summerland, \$2-2½; new Baptist college), and *Penticton* (Penticton, from \$2), at the foot of the lake. The climate in this region is wonderfully mild, and large quantities of apples, pears, plums, peaches, apricots, and cherries are raised. The beautiful wild flowers alone make this trip worth making in summer. Near Kelowna is another fruit-farm belonging to Lord Aberdeen. To the S. of the lake are several mining camps — Penticton is to be connected by railway with *Midway* (p. 288) and *Spence's Bridge* (p. 282).

Beyond Sicamous Junction the railway winds round various arms

of Lake Shuswap, the scenery of which recalls the Scottish lochs. Beyond the *Salmon Arm* we leave the lake, to cross the intervening ridge of *Notch Hill* (1690 ft.), but regain it at (267 M.) *Shuswap*, on the so-called *Little Shuswap Lake*. From the W. end of the lake issues the *South Thompson River*, a wide and deep stream, the S. bank of which we skirt. The valley widens, and signs of settlement and cultivation reappear, forming a pleasant contrast to the mountain-wilds we have been traversing. The villages of the Shuswap Indians are on the farther bank (comp p. 280). 283 M. *Ducks*.

301 M. **Kamloops** (1160 ft.; *Dominion, Grand Pacific*, \$ 2; *Rail. Restaurant*), a town of (1901) 1594 inhab., is a divisional station, the centre of supply for a large mining and grazing district, and the seat of carriage-works, a soda-water factory, saw-mills, and a tannery. Its name, meaning 'confluence', comes from its position at the junction of the N. and S. branches of the Thompson. Opposite, in the angle formed by the two rivers, lies an Indian village, at the base of *Paul's Peak* (3570 ft.). Kamloops was founded by the H. B. Co.

Those who stop at Kamloops should visit *Dufferin Hill* (2830 ft.), $3\frac{1}{2}$ M. to the W., which commands a splendid *View. The summit may be reached on horseback, but drivers have several hundred feet to climb from the road.

From *Quilchenna*, on Nicola Lake, 7 M. to the E. of Nicola Village, a main trail leads to the S. to (ca 50 M.) *Alison's (Vermilion Forks)*, in the *Smilkameen District* (guide and camping-outfit necessary). Indian guides may be obtained here for the *Ashninoulou Mts*, which have recently been visited by several parties in search of mountain-sheep and deer. The *Smilkameen District* may also be reached from Hope (p. 283)

Below Kamloops the Thompson widens into *Kamloops Lake* (1120 ft.), a hull-girt sheet of water 17 M. long and 1-2 M. wide. The railway skirts the S. bank, threading several short tunnels — 336 M. *Savonas*, at the lower end of the lake. At low water Chinamen and Indians may now be seen along the Thompson and the Fraser, engaged in gold-washing. The railway between this point and Port Moody (p. 284) was built by the Dominion Government.

Beyond this point we continue to follow the Thompson River, which flows through a series of deep rocky **Cañons*, presenting some of the most striking scenery on the continent. The train runs along a ledge cut out on the left side of the valley, high above the river. The colouring and formation of the cliffs are most varied.

358 M. **Ashcroft** (1005 ft.; *Ashcroft Hotel*, mediocre) is the entrepôt for the *Cariboo District* (p. 282) and the starting-point of the stages running into it. Pop. (1901) 475.

The following détour is commended to the notice of those who wish to vary the monotony of railway-travelling and do not fear a little fatigue. Enquiries about the coaches should be made on the spot, as their times are liable to change from year to year. There are now fair inns at the chief stations. — From Ashcroft we take the stage of the *British Columbia Express Co.* (Mon. & Frid. in summer, in winter Mon. only) for (14 M.) *Hat Creek* and (40 M., $13\frac{1}{2}$ hrs) *Lillooet (Pioneer Hotel)*, finely situated on the *Fraser River*, here crossed by a bridge. It lies in a good farming district, and its sporting possibilities include deer, bear, mountain goat and sheep, grouse, and ducks. From Lillooet a bridle-path descends along the left bank of the Fraser to (ca. 45 M.) *Lytton* (p. 282), where we rejoin the railway.

From Hat Creek the main service of the British Columbia Express Co. runs to the N. to (285 M.) Barkerville (see below, $3\frac{1}{2}$ days; fare from Ashcroft \$42.50). The chief intermediate stations are Clinton (32 M. from Ashcroft; fare \$5; Clinton Hotel), the seat of a Government Agent and a distributing point for the mining districts; *Lac La Hache* (120 M., fare \$16; *One Hundred and Fifty Mile House* (\$22.50, $1\frac{1}{2}$ day); *Soda Creek* (165 M., \$28); and *Quesnelle* (225 M.; \$37, $2\frac{1}{2}$ days). *Barkerville*, situated on *Williams Creek*, at the end of the Cariboo Road, is the seat of the Government Assay Office for the Cariboo or Upper Fraser Region, the scene of the great gold-mining excitement of 35 years ago. The scores of thousands of miners and their followers that then crowded into the Cariboo district have long since left it, but in 1901 it still contained a population of 3500 souls, partly engaged in farming and partly in gold-mining of a quieter and more scientific stamp. The value of the gold produced in the Cariboo District since 1858 is estimated at \$60,000,000 (12,000,000%). — From Clinton (to which an extra service runs from Ashcroft on Wed.) a branch-line runs to *Alkali Lake*. Other branch-lines run from One Hundred and Fifty Mile House to *Horse Fly* and to *Quesnelle Forks*, and from Soda Creek to *Alexis*.

At Ashcroft the river and railway turn to the S. (left). About 3 M. farther on we pass through the wild **Black Cañon*. — 383 M. *Spence's Bridge* (776 ft.), at the mouth of the *Nicola River*, takes its name from the old Cariboo road bridge over the Thompson.

FROM SPENCE'S BRIDGE TO NICOLA, ca 50 M., *Canadian Pacific Railway* in $3\frac{1}{2}$ hrs. (fare \$2) — This new line follows the Nicola River, disclosing some fine scenery and affording an opportunity to see the interior plateau-country of British Columbia. *Nicola* lies on *Nicola Lake* (steamers) in a good sporting district. — Contemplated extension to *Midway*, see p. 288

Below (390 M.) *Drynoch* (760 ft.) we pass through the grand **Thompson Cañon*, with its fantastic rocks and varied colouring. The *Coast* or *Cascade Mts.* now rise ahead of us.

At (405 M.) *Lytton* (695 ft.) the Thompson joins the *Fraser River*, its pure green stream long refusing to mix with the turbid yellow water of the latter.

The *Fraser*, the chief river of British Columbia, rises on the E. slope of the Rocky Mts., in about 53° N. lat., not far from the source of the *Athabasca* (p. 264). It flows at first towards the N.W., then turns sharply upon itself and runs nearly due S. for about 300 M., finally bending to the W., cutting through the S. part of the *Coast Range*, and entering the Gulf of Georgia (p. 289) after a course of over 600 M. It was reached in 1793 by *Alex. Mackenzie*, who took it for part of the Columbia, but is named from *Simon Fraser*, of the N.W. Fur Co., who explored it to its mouth in 1808, in the face of enormous difficulties from natural causes and hostile Indians. Above *Lillooet* (p. 281) the river is navigable; and steamers ascend thence to the Cariboo District (see above)

The *Coast Range*, which we reach at the *Fraser River*, is often improperly regarded as a continuation of the *Cascade Range* of Oregon and Washington, from which it is both orographically and geologically distinct. It really begins almost exactly on the S. boundary of British Columbia and runs thence to the N.W. for 900 M., with an average width of 100 M. Many of its summits are 7-8000 ft high, while some exceed 9000 ft. The rocks composing it are chiefly granite. Most of the range is densely wooded. The largest of its numerous glaciers are those descending to the sea on the *Alaska coast* (comp pp 301, 304).

We now descend the **Grand Cañon of the Fraser*, by which the river pierces the *Coast Range* (see above). The river is compressed into a narrow bed far below the railway and rushes with tremendous rapidity. The cliffs on either side rise for hundreds of

feet. The line follows the E. bank for about 6 M., then crosses the gorge by a lofty cantilever bridge, and threads a tunnel. High up on the E. side of the river runs the old *Government Road to Cariboo* (p. 282), which, about 6 M. below (411 M.) *Cisco*, is 1000 ft. above the surface of the water. The cañon grows narrower and deeper as we proceed. Among the objects seen from the car-windows are Chinamen washing for gold, Indians spearing or fishing for salmon, bright red split-salmon drying on frames, Chinese cabins, and Indian villages with their beflagged graveyards. Lower down, the river contains large sturgeon as well as salmon. — 421 M. *Keefers*.

432 M. *North Bend* (495 ft.; **Fraser Cañon House*, from \$ 3, meals 75 c.; *Mountain Hotel*, \$2), a railway divisional point, lies at a point where the walls of the cañon recede a little. The sportsman or angler will find comfortable quarters here. — About 4 M. farther on, at *Boston Bar*, with a deserted town on the E. bank, begins the wildest part of the cañon, the river rushing tumultuously through its narrow rock-cribbed bed 200 ft. below the railway. Numerous short rock-tunnels are passed in rapid succession; and names like *Helgate Rapids* and *Black Cañon* mark the character of the scenery. At (448 M.) *Spuzzum* the gorge is crossed by the graceful suspension-bridge of the old 'tote' road (see above), which now runs alongside the railway. It is in a very dilapidated condition and is hardly used except as an Indian trail. At the foot of the cañon, just beyond a longish tunnel, lies (458 M.) *Yale* (220 ft.; *Hotel*), an old trading-town, finely situated on a bench at the foot of the mountains, at the head of the navigation of the Lower Fraser. The valley now loses its cañon-like character, and the river becomes wider and more placid. To the left the silver-bearing *Hope Peaks* rise above the village of (472 M.) *Hope* (200 ft.), which lies on the E. bank of the river.

Excellent trout-fishing is obtained in the *Nicolume River*, which joins the Fraser here. — A picturesque trail, crossing a rugged watershed at a height of 5800 ft., leads from Hope to the *Similkameen District* (p. 281).

The railway and river here turn to the right (W.), completing the passage of the main ridge of the Coast Range. The valley continues to expand, and signs of civilized cultivation become more and more frequent. 480 M. *Ruby Creek* is named from the garnets found near it. Fine views are enjoyed of various spurs of the Coast Range. — 489 M. *Agassiz* (50 ft.; *Bella Vista Hotel*), with a Government experimental farm, is the station for *Harrison Hot Springs* (St. Alice Hotel, from \$2), at the foot of **Harrison Lake*, 5 M. to the N. (stage \$1). On the opposite bank of the Fraser rises *Cheam Peak*. A small steamer plies on Harrison Lake. A well-preserved mummy of an Indian chief (prob. 1000 years old) was found on the shore of this lake in 1899. — Near (498 M.) *Harrison Mills* (40 ft.), we cross the glacial-green *Harrison River*, here expanded to a lake, just above its confluence with the Fraser. This offered the only

practicable approach to the Cariboo region before the opening of the Fraser route in 1864. — Beyond (507 M.) *Nicomen* we obtain a distant view of the grand and isolated white cone of *Mt. Baker* (p 289).

517 M. *Mission Junction* is the starting-point of a line crossing the Fraser and running to (10 M.) *Sumas City*, on the International frontier, where connection is made with railways to *New Whatcom*, *Everett*, *Seattle*, and other United States points. Return-tickets are issued at Montreal, New York, Chicago, etc., allowing travellers to travel one way through the United States via this route — Other fine views of *Mt. Baker* (left) are obtained as we proceed 527 M. *Whonnock*; 536 M. *Hammond*, with brick-yards. We cross the *Pitt River* and traverse the *Pitt Meadows* (pastures and hay-land). — 543 M. *Westminster Junction* (hotel), for a short line to (9 M.) *New Westminster*.

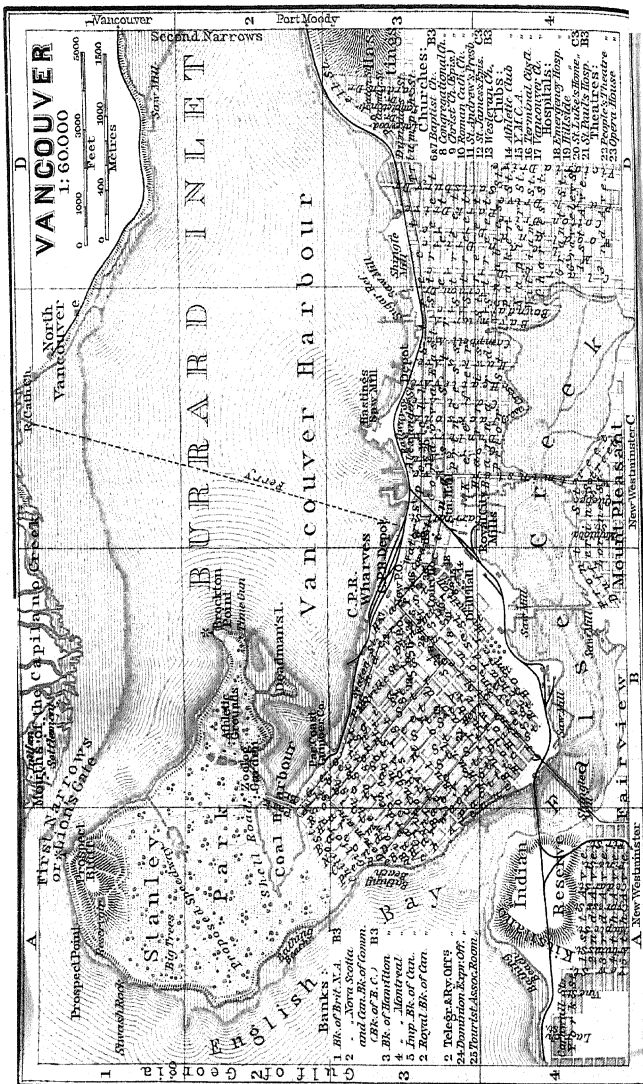
New Westminster (*Guichon's*, \$3; *Colonial Ho.*, \$2, cab from railway or ferry to hotel 50 c.), a city with (1901) 6499 inhab., pleasantly situated on the right bank of the *Fraser River*, about 15 M. from its mouth, is the oldest settlement in this region, dating from 1853, and carries on a large business in salmon-canning and the sawing and shipping of lumber. The Fraser is crossed here by a bridge, built by the Dominion Government at a cost of \$1,000,000. The industrial establishments of the city include iron-works, foundries, machine-shops, carriage-works, a brewery, a distillery, tannery, mill, etc.; and the total value of their output in 1901 was \$1,029,722. Westminster was the capital of British Columbia for several years, and contains the *Provincial Penitentiary and Insane Asylum*, the *Royal Hospital*, and other public institutions. *Queen's Park*, 80 acres in area, contains athletic grounds and exhibition-buildings. The *Carnegie Public Library* is well equipped. Steamers ply hence to *Victoria* (p 289), *Vancouver* (see below), *Nanaimo* (p. 294), *Chilliwack* (up the Fraser River), and *Steveston* (p 287). A visit should be paid to one of the canning factories, of which there are about 40 within easy reach, mainly on the Fraser, between the city and the Strait of Georgia. This is an interesting though not very appetizing experience; but even the most fastidious may visit a cold storage depôt, to which the fish are transferred direct from the boat. Longer excursions may be made to (6 M.) *Burrard Inlet* (see below), *Pitt Lake* (20 M.), and *Boundary Bay* (21 M.). — At *Burnaby*, adjoining *New Westminster*, large quantities of strawberries are grown.

Our line now bends to the right and runs through wood to (548 M.) *Port Moody*, situated at the head of *Burrard Inlet*, an arm of the Gulf of Georgia, and long the Pacific terminus of the railway. It is frequented for its bathing. Thence the line skirts the S. shore of the inlet, with its densely wooded shores, above which tower snow-capped mountains. 556 M. *Hastings*.

560 M. *Vancouver*. — Hotels. *HOTEL VANCOUVER (Pl. a, B, 3), with fine view from tower (see p 285), from \$3½; BADMINTON (Pl. b; B, 3), \$2-3; COMMERCIAL (Pl. c; B, 3), from \$2, MÉTROPOLE (Pl. d, B, C, 3), from \$2. LELAND (Pl. f; B, 3), 630 Hastings St., \$1½-2; DOMINION (Pl. g, C, 3), 214 Abbott St.. R. from 75 c.

Tramways (electric) run through the principal streets (5 c.) and to (12 M.; ¾ hr.) *New Westminster* (see above; beyond Pl. A, 4; return-fare 60 c.). — Cabs meet the chief trains and steamboats. Fare from railway-station or wharf to hotel 25 c., per hr. \$1, per day \$2½-5½.

Steamers ply daily to *Victoria* (p 289) and *Nanaimo* (p 294); also to *San Francisco*, *Seattle*, *Skagway*, *Ladysmith*, and other Alaskan ports. Smaller steamers run to *Howe Sound* (return-fare \$1), the *North Arm* (return-fare 50 c.), *Sechelt* (an old Indian village, now a summer-resort), etc. — The fine



steamships of the C P R. Co start here every three or four weeks for *Japan* and *China* (to *Fokohama*, 4280 M., in 14 days; to *Shanghai*, four, and to *Hongkong*, eight days more) and also in the middle of each month for *Honolulu* and *Australia* — Ferry to *North Vancouver*, see p. 286. — Small Boats 25 c. per hr., \$1-7 per day.

Post Office (Pl. B, 3), Granville St (new post-office in progress at the corner of Hastings and Granville Sts) — C. P. R. Telegraph Co., at the station (Pl. B, 3). — *Vancouver District Telegraph & Delivery Co.*, 305 Abbott St., *Dominion Express Co* (Pl. 24, B, 3), Granville St; *Great Northern Express Co*, 440 Hastings St. — *Telephone Co*, Le Fevre Block, Hastings St

Theatres. *Vancouver Opera House* (Pl. 23; B, 3), Granville St; *People's Theatre* (Pl. 22; B, 3), cor. Pender & Howe Sts

Consuls. United States, *Mr L Edwin Dudley*; French, *Mr Duclastel de Montrouge*; German, *Mr. J. Wulfschlag* — *Tourists' Aid Association* (Pl. 25, B, 3), 439 Granville St — *Vancouver Club* (Pl. 17; B, 3), Le Fevre Block, Hastings St; *Terminal Club* (Pl. 16; B, 3), Hastings St.; *Vancouver Yacht Club*.

Vancouver, named, like *Vancouver Island* (p. 292), after the British seaman who explored Puget Sound in 1793, is beautifully situated on the S. shore of Burrard Inlet, on a narrow neck or peninsula surrounded by water on three sides. Though there were a few settlers here at an earlier period, *Vancouver* practically dates from 1885, when it was chosen as the terminus of the C P. R. In 1886, when it contained 600 inhab., the whole town was destroyed by fire. In 1887 the population had risen to 2000, in 1888 to 6000, in 1891 to 13,685, and in 1901 to 26,133, while in 1905 it contained 45,000 inhabitants. Among these are many Chinese. In the substantial character of its buildings and the goodness of its streets, *Vancouver* compares very favourably with most towns of its age. The manufactures of the town, valued in 1901 at nearly \$5,000,000, include carriages, machinery, furniture, boots and shoes, flour, soap, soda, sugar, and beer. Ship-building is also carried on.

The traveller may begin his sight-seeing here by ascending the tower of the *Vancouver Hotel*, which commands a splendid view.

At our feet lies the city of *Vancouver*, enclosed by *Burrard Inlet*, *English Bay* (p. 286), and *False Creek*, with the fine residential suburb of *Mt. Pleasant* beyond the last. Immediately to the N.W. of the town lies the peninsula occupied by *Stanley Park* (p. 286). Farther to the W. we look outwards towards the *Gulf of Georgia* (p. 289), beyond which rise the dark mountains of *Vancouver Island* (p. 292). Across Burrard Inlet lie *North Vancouver* (p. 286) and the white houses of the *Indian Mission*, backed by the heavily-wooded and snow-capped peaks of the *Cascade Mts.* (p. 282). To the S.E. we may distinguish the conical snow-peak of *Mt Baker* (p. 289), 60 M. distant, and to the S and S.W. are the *Olympic Mts.* (p. 289). The immediate environs of the town are occupied by forests of noble pines, cedars, firs, spruces, and other trees.

The chief business-thoroughfare is *HASTINGS STREET* (Pl. B, C, 3), in which are the *Court House* (Pl. B, 3), the *City Hall & Public Library* (Pl. C, 3), the *Dominion Assay Office* (No. 146; visitors admitted), the *Bank of British Columbia* (Pl. 2; B, 3), the *Bank of British North America* (Pl. 1; B, 3), the *Bank of Nova Scotia*, the *Royal Bank of Canada*, the *Bank of Hamilton* (Pl. 3; B, 3), the *Young Men's Christian Association* (Pl. 15; B, 3), the clubs mentioned above, etc. Among other important buildings are the *Post*

Office and Custom House (see p. 285); the *Bank of Montreal* (Pl. 4; B, 3), in Granville St.; *St. Andrew's Presbyterian Church* (Pl. 11; B, 3); *Christ Church* (Epis.; Pl. 9, B 3), these two in Georgia St.; *St. James's Episcopal Church* (Pl. 12; C, 3); two *Baptist Churches* (Pl. 6 & 7; B, 3); the *Congregational Church* (Pl. 8, B, 3); the *Wesleyan Church* (Pl. 13; B, 3); the *Roman Catholic Church* (Pl. 10; B, 3); the *Hillside* and *St. Paul's Hospitals* (Pl. 19 & 21; B, 3), in Burrard St.; *St. Luke's Home* (Pl. 20; C, 3); the *Public Schools*; and the *Vancouver Opera House* (see p. 285). — The *University College of British Columbia*, in Oak St. (beyond Pl. A, 4), established in 1906, is affiliated with McGill University (p. 135). — A visit may also be paid to one of the large *Saw Mills*, such as the *Hastings Saw Mill* (Pl. C, 3). — Many of the *Private Residences*, with their lawns and gardens, are astonishingly handsome for so young a city.

The *Harbour*, or *Coal Harbour* (Pl. A, B, 2), entered by a narrow channel through which the water rushes with great speed, is safe and deep, and generally contains quite a little fleet of vessels, often including one of the great Japan liners and sometimes a British gun-boat. Among the chief cargoes are tea, silk, seal-skins, coal, and timber.

The chief attraction of Vancouver to the tourist is, however, the beautiful **Stanley Park* (Pl. A, B, 1, 2; reached by Pender St. cars; band on Sun. afternoons), 960 acres in extent, which, with commendable promptitude, the youthful city has laid out on the wooded peninsula connected with the W. side of the city by a long bridge.

Visitors are advised to hire a carriage (\$3.5) and drive round the road encircling the park (9 M.), affording splendid views of English Bay, the Gulf of Georgia, and Burrard Inlet. (The best plan is to turn to the left on entering.) The *Shell Road*, on the side next the harbour, is perhaps the best part of the drive; and a magnificent *View is obtained here from *Brockton Point* (Pl. B, 2), at the foot of which lies the wreck of the 'Beaver', the first steamer that reached this district *viâ* Cape Horn. A transverse drive (sign-post) leads across the island through the magnificent forest with which it is clothed, passing some gigantic red pine (a few of them 250 ft. high), a spruce 41 ft. in girth, and a cedar 3 ft. larger. Foot-paths lead into the heart of the forest, which has otherwise been left almost entirely as nature made it. — Near the entrance of the park is a small *Zoological Garden* (Pl. B, 2). — A large reservoir in Stanley Park stores water brought from the Capilano River (see below) by large pipes below Burrard Inlet.

English Bay (Pl. A, 2, 3, electric cars), adjoining Stanley Park, has a fine beach and is frequented for bathing and boating. — To the S. of English Bay and to the W. of *Kitsilano* (Pl. A, 4) lie the *Golf Links* (3 M. from the town).

The waters of Burrard Inlet abound in large and beautifully hued medusæ, and the piles of the wharves reveal, at low water, interesting algæ and other forms of marine life.

On the opposite side of Burrard Inlet (ferry every ¼ hr. from the foot of Carrall St., Pl. C, 3; return-fare 20 c.) lies North Vancouver (*Hotel*, \$2), which should be visited for the sake of the drive (carr. from \$3) to the (4 M.) **Capilano Cañon* (suspension-bridge, 190 ft. high). The drive may be continued along the 'Keith Road' to (15 M.) the *North Arm*. — *Grouse Mountain* (4350 ft.), affording a fine *View of the city and its environs, is ascended from N. Vancouver by the path of the Tourist Association (numerous finger-posts) in 3½-4 hrs. (ponies, not necessary, at the hotel). The ascent of the *Crown* (5600 ft.), an extinct crater, requires 6 hrs. (*viâ Sister Creek*, an affluent of the Capilano). That of the *Lions* (5500 ft.), across the valley to the W., takes considerably longer.

From VANCOUVER TO STEVESTON, 15 M., *British Columbia Electric Railway* in 1 hr. (return-fare \$1.20). The line follows the Fraser River. — *Steveston*, the headquarters of the salmon-packing industry, may be visited (best in July or Aug.) for the sake of inspecting one of the salmon-canneries (comp. p. 284). Seven varieties of salmon are recognized in British Columbia, sockeye, coho, spring-salmon, steelhead, tyhee, dog-salmon, and hump-back. The first of these is the most abundant and the third is the best; the last two are very inferior. Steveston lies on *Lulu Island*, at the mouth of the Fraser, and the salmon-fleet here often offers a picturesque sight.

Good shooting and fishing can be obtained in the environs of Vancouver. The game includes bears, wolves, mountain-goats, deer, caribou, moose, ducks, grouse, partridges, and English pheasants (successfully introduced into British Columbia and Vancouver Island).

From VANCOUVER TO SEATTLE, 158 M., *Great Northern Railway* in 6 hrs. (fare \$4½). The line runs direct to (14 M.) *New Westminster* (p. 281). Beyond (38 M.) *Douglass* we enter the United States. From (38 M.) *Blain* to (168 M.) *Seattle*, see *Baedeker's United States*.

From VANCOUVER TO SEATTLE, 178 M., *Northern Pacific Railway* in 8 hrs. (fare \$4½). From Vancouver to (53 M.) *Sumas*, see p. 284. From this point, where we quit Canada, to (178 M.) *Seattle*, see *Baedeker's United States*.

56. From Revelstoke to Arrowhead, Robson, and Nelson. Kootenay Region.

The Kootenay Region, besides its mining importance, offers much that is attractive in scenery; and leisurely travellers might vary their return-trip across the continent by proceeding from Revelstoke to *Kootenay Landing* (p. 268) and thence back by railway to *Dunmore* (p. 255), on the main Canadian Pacific line. — The steamers plying on the Arrow and Kootenay Lakes are good, but perhaps that would be too much to say of the hotels.

a. From Revelstoke to Arrowhead.

28 M. CANADIAN PACIFIC RAILWAY in 1½ hr. (fare \$1.15).

Revelstoke, see p. 279. The line skirts the *Columbia River*. The only intermediate station is (15 M.) *Wagwam*. — 28 M. *Arrowhead* lies at the head of the expansion of the river known as **Upper Arrow Lake* (1390 ft., 40 M. long and 3 M. wide).

b. From Arrowhead to Robson (West Robson).

135 M. STEAMERS of the *Canadian Pacific Railway* in 9½-11 hrs. (see below; fare \$5.10, berth \$1, meal 75 c). — This line facilitates communication with an important mining district. Robson has steamer and railway communication with *Spokane* (see p. 289), and with an adequate service of boats and trains this might be made an excellent route from the Canadian Rockies to the Yellowstone Park.

The sail down the Upper Arrow Lake, which is surrounded with forests, is very pleasant. At places the banks rise in perpendicular cliffs. About halfway down it, on the E. bank (left), are *Halcyon Hot Springs* (Hotel, with villas, \$3), opposite which rises *Halcyon Peak* (10,400 ft.). At the back of the hotel is a pretty waterfall. At the foot of the lake lies *Nakusp*, the junction of a branch-railway to the *Slocan Mining District* (see p. 289). A river-stretch of 20 M. connects Upper Arrow Lake with **Lower Arrow*

Lake (1380 ft.), a similar expansion, 55 M. long and 2 M. wide. From the foot of this lake the Columbia runs, between mountains, to (15 M.) *Robson* or *West Robson* (1375 ft.; *Robson Ho.*), at the mouth of the *Kootenay River*. Another steamer plies from Robson to *Little Dallas* (p. 289; fare from Revelstoke \$9), in Washington, 45 M. lower down.

FROM ROBSON TO ROSSLAND, 31 M., *Canadian Pacific Railway* in 2¼ hrs. (fare \$1.30). This line descends the W. bank of the Columbia. 12 M. *China Creek*. — 21 M. *Smelter Junction*, for the spur-line to (21 M.) *Trail* (*Crown Point*, \$2¼; *Meakin*), a recent mining town of (1901) 1360 inhab., which contains the largest smelting-works in Canada. — The railway now bends away from the river. — 31 M. *Rossland* (*Allan, Windsor*, \$2¼; *Bellevue, U. S. Agent*), the centre of the newly developed and important mining district of the West Kootenay, has passed in a very few years from non-existence to the condition of a city of (1901) 6159 inhab., with electric lighting, water-works, newspapers, schools, churches, and other marks of progress. Good authorities assert that the deposits of gold within a radius of 12 M. from Rossland equal or excel those of any similar area in the world; silver and copper are also found. Among the chief mines are the *War Eagle*, *Le Roi*, *Iron Mask*, and *Centre Star*. — Rossland is about 6 M. from the American frontier and is connected by railway with (17 M.) *Northport* (p. 289), on the *Spokane Falls & Northern R.R.*

FROM ROBSON (WEST ROBSON) TO MIDWAY, 99 M., *Can Pac Railway* (*Robson & Penticton Branch*) in 6 hrs. (fare \$3.75). This line intersects the *Christina Lake* and *Kettle River* mining districts and is to be prolonged via *Penticton* (p. 280) to *Nicola* and *Spence's Bridge* (comp. p. 280). — The train runs to the W. along the S. bank of the Columbia to (23 M.) *Tunnel* and then turns to the S. 30 M. *Harrois*; 49 M. *Fife*, on *Lake Christina*. We then follow the *Kettle River*, via (54 M.) *Cascade City* (1580 ft.) and (59 M.) *Gilfrin*, to (67 M.) *Grand Forks* (1745 ft., *Yale*, 2½-3; *Winnipeg*, \$1½-3), the junction of lines to points in the United States. 81 M. *Eholi Junction* 90 M. *Greenwood* (2460 ft.; *Windsor, Imperial*, \$2) — 99 M. *Midway* (1910 ft. *Central, Crowell*, \$2).

c From Robson to Nelson.

28 M. *CANADIAN PACIFIC RAILWAY* (*Columbia & Kootenay Branch*) in 1½-1¾ hr. (fare \$1.25).

Robson, see above. The line runs along the N. bank of the *Kootenay* or *Kootanie River*, affording a view of the splendid **Rapids of the Kootenay*, which form actual waterfalls about halfway between Robson and Nelson. From (15 M.) *Slocan Junction* a branch-line runs to the N. to (32 M.) *Slocan City* (*Arlington*, \$2½; see p. 289).

28 M. *Nelson* (1760 ft.; *Hume Ho.*, *Strathcona*, from \$3; *Queen*, \$2; *U. S. Agent*), on the S. bank of the Kootenay, is a mining town with (1901) 5273 inhab. and a large smelter. Near Nelson are the *Silver King*, *Toad Mt.*, and other mines. From Nelson, which lies at the head of the rapids, steamers ascend the Kootenay to *Balfour*, *Pilot Bay*, *Ainsworth*, and (3¼ hrs.) *Kaslo* (*Kaslo Ho.*, \$2½-3; *Slocan*, \$2¼), on **Kootenay Lake* (1730 ft.), an expansion of the river among the *Selkirk Mts.*, well stocked with sturgeon, land-locked salmon, trout, and char. Another steamer plies to (5½ hrs.) *Kootenay Landing*, the present terminus of the *Crow's Nest Pass Railway* (see p. 268).

From Nelson an extension of the railway goes on to (20 M.) *Procter*, at the mouth of the Kootenay River, whence a steamer plies to Kootenay Landing (p. 288). — From Kaslo (p. 288) a steamer plies to ($1\frac{1}{3}$ h.) *Lardo*, whence a railway runs to (33 M.) *Gerrard*, on *Trout Lake* (steamer to *Trout Lake City*). Trips are also made from Kaslo to *Kokanee Mt.* and *Kitchener Glacier*. — The Kootenay River rises near the Hector Pass (p. 271), flows to the S. for about 200 M., then turns (about 40 M. beyond the American frontier), and flows N.W. to (100 M.) Kootenay Lake. The Kootenay Indians, belonging to the Selish stock, are favourable specimens of red men. Their canoes of pine-bark are of a unique shape, with long sharp cutwaters at each end. For the fishing, comp. p. liii.

From Nelson the NELSON & FORT SHEPPARD RAILWAY runs to (70 M.) *Northport* (p. 288), whence the SPOKANE FALLS & NORTHERN RAILWAY (G. N. R. system) runs to (4 M.) *Little Dallas*, on the Columbia, and on to (130 M., 10 hrs.) *Spokane* (see *Baedeker's United States*).

FROM NAKUSP TO SANDON, 41 M., railway in $3\frac{1}{2}$ hrs (fare \$1.65). This line opens up the *Slocan Silver Mining District*, the annual output of which exceeds \$3,000,000 — *Nakusp*, see p. 287. The train runs towards the S.E. 13 M. *Summit Siding* 24 M. *Slocan Lake Station*, at the head of *Slocan Lake*, the E. bank of which we now skirt. From (29 M.) *Roseberry* a steamer plies on the lake to *Enterprise* and ($2\frac{3}{4}$ hrs) *Slocan City* (see p. 288), at its S. end. The railway ends at (41 M.) *Sandon* (Sandon, Filbert, \$2), which also connects by railway with *Kaslo* (p. 288), on Kootenay Lake.

Passes from the Kootenay District into the *Rocky Mts. Park*, see p. 262

57. From Vancouver to Victoria.

STEAMER daily in 4-5 hrs. (fare \$2½). There is often sufficient motion on the Gulf of Georgia to cause sea-sickness.

Vancouver, see p. 284. The steamer quits the *Coal Harbour* and descends *Burrard Inlet*, passing the wreck of the 'Beaver' (see p. 286) to the left. Good retrospect of the city. On reaching the **Gulf of Georgia** (20-30 M. wide), it turns to the left and steers to the S. To the W. rise the blue mountains of *Vancouver Island*, to the E. the majestic white cone of *Mt. Baker* (10,810 ft.). The line of separation between the waters of the Fraser and the Strait is very sharply defined. Farther on we enter the *Canal de Haro*, which the arbitration of the Emp. William I. of Germany in 1872 decided to be the line of demarcation between British and American possessions. It lies between *Vancouver Island*, on the right, and the *San Juan Islands*, on the left. Ahead, beyond the *Straits of San Juan de Fuca*, rise the *Olympic Mts.* Finally we turn to the right (W.), round a rocky headland, and enter the harbour of *Victoria*. The conspicuous building on the height to the right is the house of the late *Hon. Robert Duns-muir*, a wealthy coal-owner (comp. p. 292). To the left of the pier, among trees, are the barracks of *Esquimalt* (see p. 291).

Victoria. — **Hotels.** CANADIAN PACIFIC HOTEL (Pl. a; F, 2), at the head of the harbour, to be opened in 1907; DALLAS (Pl. c; E, 2), facing the sea, near the Outer Docks, \$3-5, THE DRIARD (Pl. b; F, 2), in the centre of the town, \$2½-5, R. from \$1¾, VICTORIA (Pl. c, F, 1), Johnson

St., \$ 2-4, R. from \$ 1, DOMINION (Pl. g, F, 2), Yates St., opp the Public Library, well spoken of, \$ 1½-2½, R. from 50 c., ST. FRANCIS (Pl. f; F, 1), GORDON (Pl. h, F, 1), KING EDWARD (Pl. d, F, 1, 2; from \$ 2), these three also in Yates St.; VERNON, commercial, \$ 2-2½. — *Rocabella* (Mrs. Tuck), Victoria Crescent, a good boarding-house. — *Poodle Dog Restaurant*, Yates St., D. 75 c

Cabs: per drive within the city, 1-2 pers. 50 c, each addit pers 25 c; to or from steamer or train, each pers. 50 c; per hour \$ 1 50; per day \$ 2½-5½; each trunk 25 c., small baggage free — Tramways (electric) run through some of the chief streets and to the outer wharf (1½ M.; 5 c.); also to (3 M.) *Esquimalt* (10 c.). — **Steamers** ply daily to *Vancouver* (see p 284); also to ports in *British Columbia* and *Vancouver Island* (Nanaimo, North Saanich, Comox, etc.), *Puget Sound Ports*, *San Francisco*, *Alaska* (see p. 293), *Honolulu*, *Australia*, and *Japan* (comp. p 285). — **Boats** 25 c. per hr., \$ 1-7 per day.

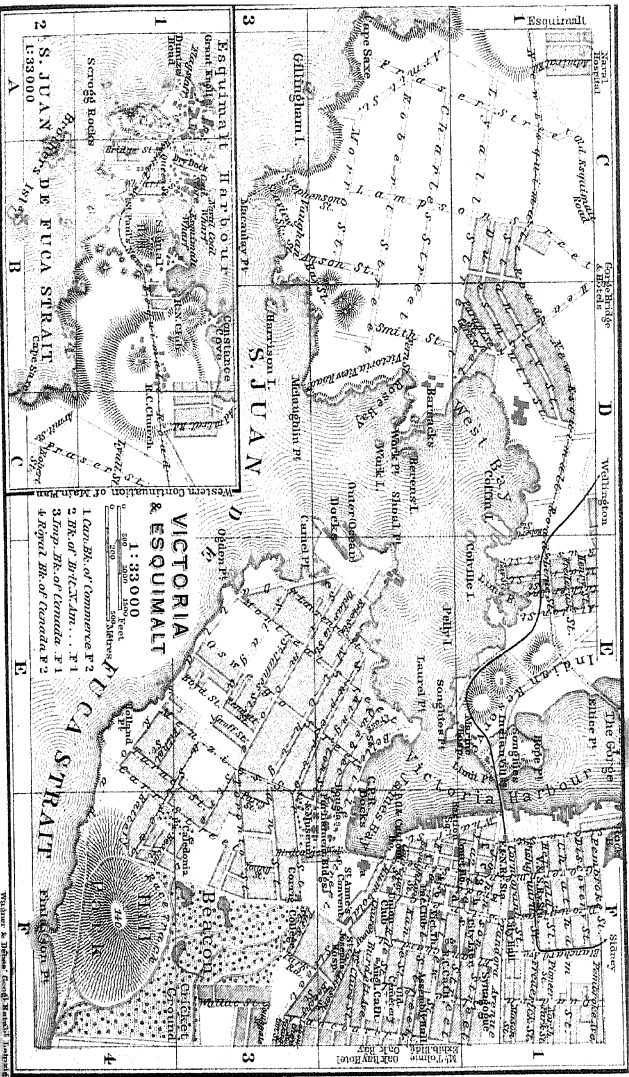
Consuls. American, Mr. *Abraham E Smith*; German, Mr. *Carl Loewenberg*; French, Col. *F. B. Gregory*. — **Post Office** (Pl. F, 2), Government St. (open 7-7). — *C. P. R. Telegraph Co.*, Trounce Ave — *Telephone Co.*, above the Bank of Montreal — *B. C. District Telegraph & Delivery Co.*, Theatre Block, View St. (Pl. F, 2), *Dominion Express Co.*, *North Pacific Express Co.*, *Wells Fargo Express Co.*, cor Government St. and Trounce Ave; *Victoria Transfer Co.*, 24 Broughton St. — *Tourists' Aid Association*, 34 Fort St. (Pl. F, 2). — **Clubs.** *Union* (Pl. F, 2), cor Courtney and Douglas Sts; *Victoria*, cor. Fort and Broad Sts (Pl. F, 2), *Pacific* (Pl. F, 2), Fort St.

Sports. *Cricket* is a favourite game at Victoria, and there are grounds at both the military and naval stations. — *Golf*, see p. 292. — A large *Regatta* is held annually on May 24th.

There are several good shops, chiefly in Johnson St. (Pl. F, 1), where Chinese and other Oriental curiosities may be advantageously purchased by experienced buyers. Indian (Alaskan) curiosities may be obtained of the Indian peddlers who haunt the steamboat-wharves.

Victoria, the capital of *British Columbia* (see p. 292) and seat of the Lieutenant-Governor, is a quiet and attractive little city with (1901) 20,816 inhab. (now about 25,000), beautifully situated at the S.E. end of Vancouver Island, forming a pleasant contrast to some of its rather raw-looking neighbours on Puget Sound, and containing a larger proportion of a cultivated 'leisured class' than is usual in the Far West. The substantial buildings, the wide and well-kept streets, the gay flower-gardens, and the numerous country-houses in the environs give the place quite an old-world air; while the climate, rarely rising above 75° Fahr. or descending much below freezing-point, rivals that of the most delightful health-resorts in the South of England. The population is very heterogeneous, including native-born Canadians, Britons, Americans, Italians, Frenchmen, Germans, Japanese, and Chinese (3000). It carries on a large trade in canned salmon, lumber, coal, rice, etc., the total value of its exports and imports in 1905-6 amounting to about \$ 5,000,000. The value of its manufactures in the same year, including boats, brass, beer, bricks, carriages, machinery, flour, lumber, soap, and soda, was \$ 2,617,573.

Fort Victoria was established here by the Hudson Bay Co. in 1842, but did not begin to assume the aspect of a town before the gold-mining excitement of 1858. In 1866 Vancouver Island was united with *British Columbia*, and *Victoria* was selected as the capital of the province. In 1871 the population was 3270, in 1881 it was 5925, and in 1891 it was 16,841. In 1893 *Victoria* was made the station of a corps of Royal Marine Artillery and Royal Engineers, but it is now garrisoned by Canadian troops.



Wingard & Johnson, London, England, 1880

It is the headquarters of the Canadian fur-sealing fleet, which consists of about 30 vessels and caught 14,646 seals (valued at \$ 219,690) in 1904.

The handsome ***Parliament Buildings** (Pl. F, 2, 3), recently completed at a cost of \$ 800,000, lie in Belleville St, near *James Bay*, an arm of the harbour, and are passed on the way from the steamboat-wharf to the centre of the town (tramway, see p. 290). The buildings include the *Parliament House*, the *Provincial Museum & Library*, and the *Government Offices*. A statue of *Captain Vancouver* surmounts the dome, while in front stands a monument commemorating *Sir James Douglas*, the first governor of the colony.

The *Museum* (open 9-12 and 1-4; Sat., 9-1) contains specimens illustrating the geology and natural history of the colony. — Admission to the sittings of Parliament (one chamber only) is easily obtained (comp. p. 153).

The other chief buildings of Victoria include the *City Hall* (Pl. F, 1), the *Court House* (Pl. F, 1), the *Post Office & Custom House* (Pl. F, 2), the *Marine Hospital* (Pl. E, 1), the *Anglican Cathedral* (Pl. F, 2), the *Roman Catholic Cathedral* (Pl. F, 2), the *St. Anne's Convent* (Pl. F, 2), the *Exhibition Building* (beyond Pl. F, 2), *St. Joseph's Hospital* (R. C., Pl. F, 2), the *Jubilee Hospital*, the *Victoria Theatre* (Pl. F, 2), the *Victoria Public Library* (Pl. F, 1), the *Assembly Hall* (Pl. F, 2), the *Banks* (Pl. 1-4; F, 1, 2), and several well-built *Schools, Colleges*, and *Charitable Institutions*.

***Beacon Hill Park** (Pl. F, 3, 4) affords pleasant walks and drives among its fine trees, and commands charming views of the Straits of San Juan de Fuca, the Olympic Mts., Mt. Baker (to the E.), and the city. It contains a small collection of native beasts and birds.

A visit to the **Chinese Quarter**, with its drug and curiosity stores, its joss-houses, its theatre, and its restaurants, is highly interesting. — There is a reservation of *Songhish* or *Songhies Indians* (Pl. E, 1) near the city, and survivors of this tribe are often seen in the streets and at the wharves (comp. below).

About 3 M. to the W. of Victoria, reached by a good road lined by beautiful trees and passing near the *United Service Golf Links* (tramway, see p. 290), lies **Esquimalt** (accent on second syllable; Pl. A-C, 1, 2), an attractive English-looking village, on a picturesque bay, with a fine land-locked harbour (36 ft. deep), which is much larger than that of Victoria. Down to 1905 Esquimalt was the headquarters of the British Pacific Squadron, but in that year it was handed over to the Dominion Government, and the *Navy Yard* was dismantled. The fine dock (Pl. B, 1), however, 430 ft. long, 65 ft. wide, and 26 ft. deep, has been retained for the use of Canadian vessels. Esquimalt and the entrance to the harbour are strongly fortified.

Several other pleasant **Drives** may be taken from Victoria, the roads around the city being usually excellent and running through luxuriant woods of pines, maples, arbutus, madroñas, fern-trees, English oaks (not known on the mainland), wild roses, and syringas. Among the most popular points are *Oak Bay* (with *Oak Bay Park*, the *Victoria Golf Links*, a hotel, and good opportunities for boating and bathing), *Cordova Bay*, *Cadboro Bay*, *All Tolmie* (view), and the district of *Metchoan* (15 M.; stage) — A steamer plies twice weekly to *Mayne Island* (Point Comfort Hotel), a favourite

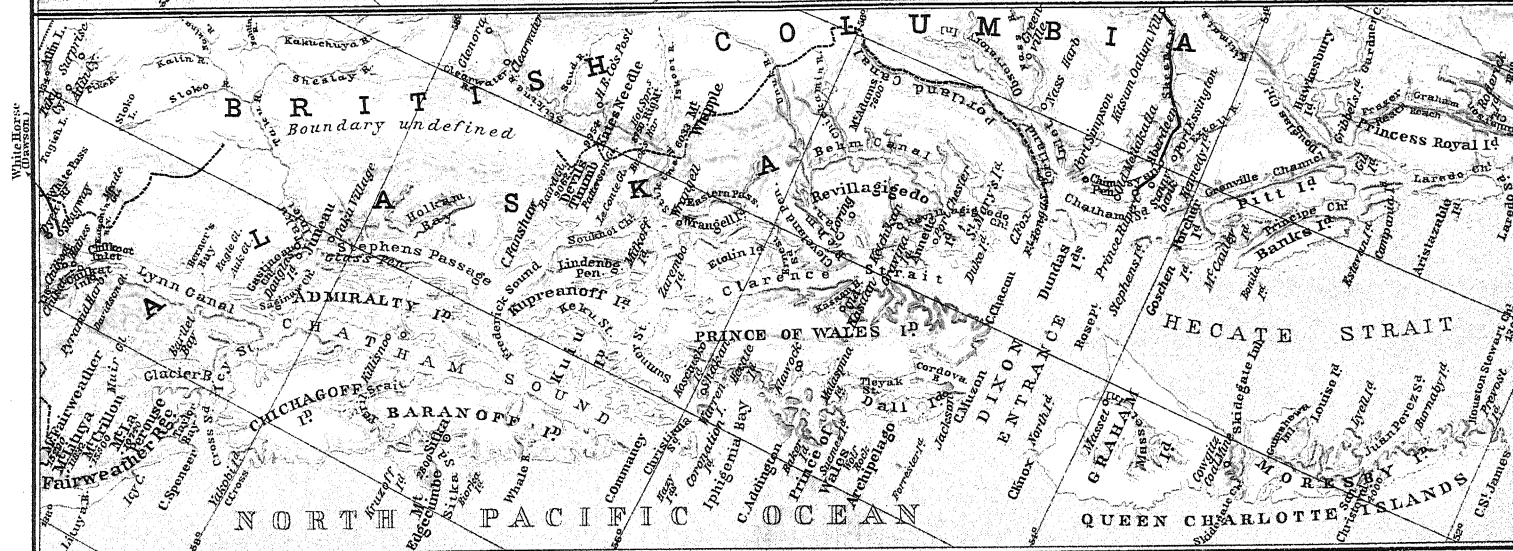
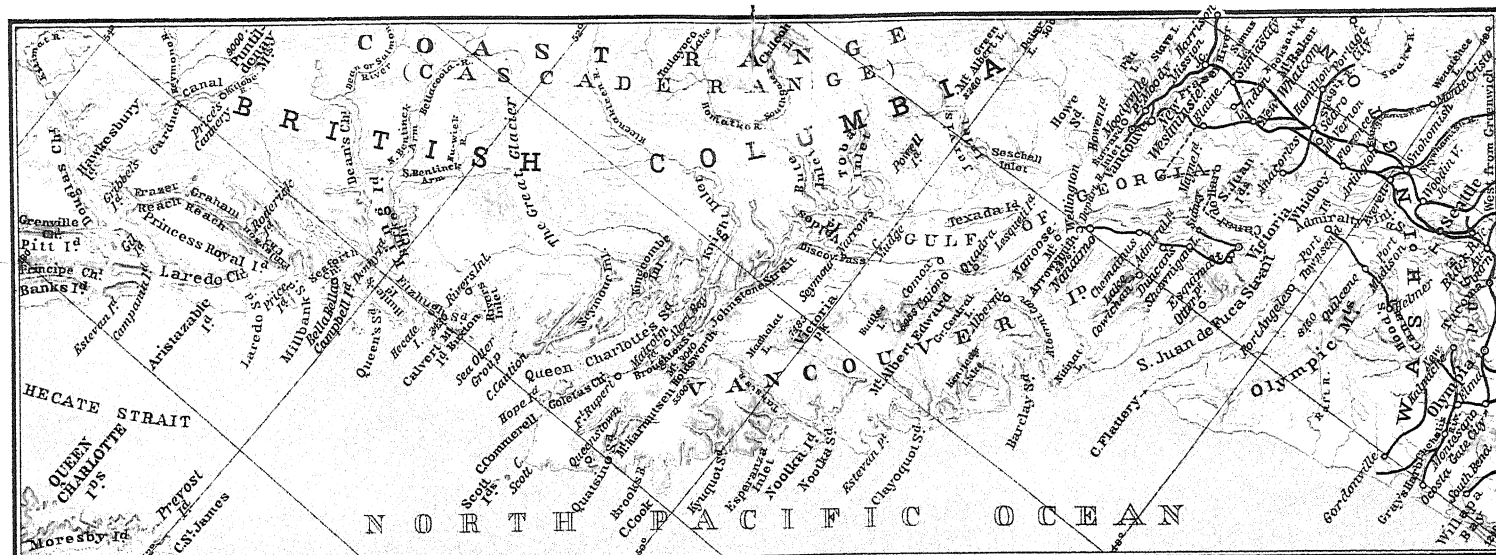
summer-resort. — BOATING and SAILING are also carried on here with great zest, a favourite trip being that up the inlet known as the **Gorge*, in which veritable rapids are formed by the tide (steam-launch from the city hourly in summer; fare 25 c.). A park has been laid out here. — Good SHOOTING and FISHING are obtainable within easy reach of the town

FROM VICTORIA TO NANAIMO AND WELLINGTON, 78 M., *Esquimalt & Nanaimo Railway* (C. P. R.) in 4 hrs (fare \$ 3.50) The scenery on this line is bold and impressive. The work of construction was attended by considerable difficulty, and numerous high bridges and trestles were necessary. — 4 M. *Esquimalt* (p 291) 11 M. *Goldstream* (Goldstream Ho.). — 26 M. *Shawnigan Lake* (Strathcona Hotel, with boats, etc.). The lake, 17 M. long, is a favourite resort for boat-races — 35 M. *Cowichan*. At (40 M.) *Duncan's* (Quamichan Hotel) stages are in waiting to take passengers to (21 M.) *Lake Cowichan* (hotel), a salmon-fishing resort. The lake is 25 M. long (steamer). — 52 M. *Chemainus* (Louisville Hotel; U. S. Agent) has some of the largest lumber-mills and logging-camps in the world — 59 M. *Ladysmith*, with the smelter of the *Tyee Mine*, on Mt. Sicker (see below) — 73 M. *Nanaimo*, see p. 294 — 78 M. *Wellington* (*Sunset Ho.*, 2 M. from the village; *Wellington Ho.*), with important coal-mines (R. Dunsmuir & Sons; p. 239), the products of which are shipped at *Departure Bay* (comp. p. 294).

Another short railway runs to the N. from Victoria along the coast to (16 M.) *Sidney* (Hotel; fare 50 c.). It opens up a good farming-country. From *Sidney* a steamer runs daily to *Crofton*, with the large smelter of the *Lenora Copper Mines* on *Mt. Sicker*, affording a charming trip among the islands of the Gulf of Georgia

British Columbia, of which Victoria is the capital, includes the whole of Canada to the N. of the United States and to the S. of Yukon Territory, between the Rocky Mts. on the E. and the Pacific Ocean and Alaska on the W. Its extreme length is 1200 M., its greatest width 650 M., and its area 372,630 sq. M. (rather more than the combined area of France, Prussia, and Bavaria). Pop. (1901) 178,657. It is essentially a mountainous district, though including large tracts of good arable land. The chief river of British Columbia is the *Fraser* (p. 282), but parts of the province belong to the hydrographic basins of the *MacKenzie* (p. 284) and the *Yukon* (p. 303). Its resources have so far been developed only to a slight extent. The staple industries of the province are lumbering, fishing, and mining. The vast forests contain some of the finest timber in the world, the most important tree being the Douglas fir, which, on the coast, often attains a height of 200-300 ft. The red cedar, the Oregon pine, and the spruce, are also important varieties. Many of the rivers abound in salmon, while herring, halibut, and other fish are taken on the coast. The salmon 'pack' in 1904 amounted to about 500,000 cases (48 lbs. each), valued at nearly \$ 3,000,000. There are numerous varieties of game in British Columbia, including the English pheasant (comp. p. 237). The mineral resources include gold (of which at least \$ 100,000,000 has been produced), coal, silver, and iron. British Columbia contains about 24,000 Indians, the annual value of whose industries amounts to \$ 700,000 — Vancouver Island was made a Crown colony in 1849, the mainland of British Columbia in 1858. The two colonies were united in 1866 and entered the Canadian Confederation in 1871 — The lowest coin current in British Columbia is the piece of 5 cents.

Vancouver Island, on which Victoria lies, is the largest of the numerous islands included in British Columbia, being 260 M. long and 50-80 M. wide, with an area of 20,000 sq. M. The greater part of its surface is covered with mountains, reaching a height of 6-7000 ft. (Victoria Peak 7485 ft.), and little of its surface has been explored or reclaimed. It is rich in minerals (comp. p. 294). The island was discovered by Juan de Fuca in 1592, and takes its name from Vancouver, who surveyed its coasts in 1793. The two native tribes are the *Nootkas* and *Selish*, of whom a few degenerate specimens may be met in Victoria. Vancouver Island is almost free from the mosquito and the black fly, which are often troublesome on the mainland



VIII. ALASKA AND THE YUKON.

Route	Page
58. From Victoria to Sitka. The Yukon Region	293
Treadwell Gold Mine	300
From Skagway to White Horse	301
Atlin District	302
From White Horse to Dawson	302
Klondike Mining Region	303
Unalaska. Mt. Logan, Mt. St. Elias, and Mt. McKinley	306

58. From Victoria to Sitka.

The Yukon Region.

The tourist traffic to Alaska is mainly in the hands of the *Pacific Coast Steamship Co.* of San Francisco, and a pamphlet with all necessary information, including stateroom-plans of the steamers, may be obtained from C. D. Dunann, 10 Market St., San Francisco, or from any agent of the company. The steamer 'Spokane' of this company (2000 tons burden) makes about six trips from Tacoma to *Sitka* and back every summer (June-Aug.), taking about 11 days to the round journey (fare \$100-250, according to position of berth and stateroom, the highest charge securing the sole occupancy of a large deck-stateroom). This steamer, which carries comparatively little freight, calls at Seattle, Port Townsend, Victoria, Ketchikan, Wrangell, Juneau, Treadwell's, Skagway, the Taku and Davidson Glaciers, Glacier Bay, Killisnoo, and Sitka. — The steamships 'City of Topeka', 'Cottage City', and 'City of Seattle' of the same company sail fortnightly the year round, carry freight as well as passengers, take 12-14 days for the round trip from Tacoma (fares \$80-200), and call at more points in Alaska. Return-tickets are also issued from San Francisco (fare from \$124) for passengers travelling by sea between that city and *Port Townsend*. The fares from Seattle, Port Townsend, or Victoria are the same as those from Tacoma. Berths should be secured in advance. — Steamers of the *Canadian Pacific Railway Co.* (British Columbia Coast Service) ply regularly from Victoria and Vancouver to the various points along the British Columbia coast as far N as *Port Simpson* (p. 296, fare \$17-20) and also to (5 days) *Skagway* (p. 301), calling at *Ketchikan*. The through-fare to *Dawson* (p. 303) by this route is about \$75 in summer, \$150 in winter (meals and berths on the steamers included). The passengers by the Canadian steamers have not always the same privileges as the American steamers in landing at Alaska points. — Other excursion-steamers occasionally make the trip to Alaska in summer, but should not be patronized without careful investigation as to their equipment and the experience of their officers.

The arrangements of the Alaska trip resemble those on the trip to the North Cape (see *Baedeker's Norway and Sweden*), and it involves no greater hazard or fatigue. There are but few hotels in Alaska, and passengers live almost entirely on the steamers. The weather is generally pleasant in June, July, or August. Warm winter-clothing should be taken, as the nights on board are often cold, though the sun may be quite powerful during the day. Stout boots are desirable for the short excursions on land, and waterproofs are indispensable. Deck-chairs may be bought or hired at Victoria. Nearly the whole of the voyage is in the calm channel between the coast-islands and the mainland, so that sea-sickness need not be dreaded. The steamers are safe and reasonably comfortable. The "Scenery passed *en route* is of a most grand and unique character, such as, probably, cannot be seen elsewhere at so little cost and with so little toil or adventure. In the description of the text the usual route of the

'Spokane' is followed. The approximate distances from Victoria by this course are given in nautical miles (7 naut. miles = about 8 statute miles). Native curiosities can, perhaps, be best obtained at Sitka (p. 305), furs at Juneau (p. 300). In buying the latter, the traveller should be on his guard against deception and patronize the larger and more respectable stores only. United States money is the current coin, and silver is preferred by the Indians to gold or notes.

Alaska time is 1 hr. behind that of the Pacific standard (p. xi)

Victoria, see p. 289. The course through the *Canal de Haro*, passing the *San Juan Islands*, is the same as that described in the reverse direction at p. 289. Farther on we traverse the broader waters of the *Gulf of Georgia* (p. 289), passing various islands off the coast of Vancouver.

30 M. *Nanaimo* (*Windsor, Wilson Ho.*, \$2-2¹/₂; *U. S. Consular Agent*), a small town on the E. coast of Vancouver Island, with (1901) 6130 inhab., is of importance as the shipping-port of the extensive collieries of the Western Fuel Co. (the headquarters of which are in California) and of the Dunsmuir mines at Ladysmith (p. 292) and Comox (see below). There are also large saw-mills. The Alaska steamers often stop to coal here either in going or returning. The pretty, rose-gardened cottages of Nanaimo are very unlike the grimy abodes of coal-miners in England, and many of the miners own them in freehold. The daily wage of the miners in 1906 was \$3-5. The annual output of coal at Nanaimo is about 500,000 tons, and nearly twice as much is produced at the Wellington pits (p. 292), the total output of the island being about 1,500,000 tons. The H. B. Co.'s *Blockhouse* (the 'Bastion') at Nanaimo dates from 1833. Behind Nanaimo rises (4 M.) *Mt. Benson* (5365 ft.; view), to the top of which a road has been constructed. Good boating may be enjoyed in the bay (25-50 c per hr.), and numerous pleasant excursions may be made. — From Nanaimo to (73 M.) *Victoria* and to (5 M.) *Wellington* by railway, see p. 292. *Wellington* may also be reached by a pretty road through luxuriant woods, or by water viâ (3 M.) *Departure Bay* (p. 292). *Vancouver* (p. 284) lies on the mainland, directly opposite Nanaimo (steamer, \$3).

Farther on we see few settlements or signs of life. The shores are low and heavily wooded, but lofty mountains rise behind them on both sides, those on the mainland covered with snow. Long, deep, and narrow fjords, flanked with lofty mountains, run up into the land. To the right lie *Lesqueti Island* and the large *Texada Island*, covering the entrance to *Jervis Inlet*, one of the just-mentioned fjords, on the banks of which are quarries of fine slate. *Comox* (left), on Vancouver Island, opposite *Texada* and 60 M. to the N. of Nanaimo, is an important coal-mining station, with regular steamer-communication with *Victoria*, *Vancouver*, and *Nanaimo*. About 80 M. beyond Nanaimo we leave the *Gulf of Georgia* and enter ***Discovery Passage**, a river-like channel, 25 M. long and 1-2 M. wide, which separates Vancouver Island from *Valdes Island* and is flanked by mountains 3-6000 ft. high. *Valdes Island*, ending on the S. in *Cape Mudge*,

occupies nearly the whole channel, and a scheme has been in consideration for running a railway from the mainland to Vancouver Island by bridges constructed over the narrow waterways here. Behind Valdes Island opens the narrow *Bute Inlet*, 40 M. long, flanked by mountains 4-8000 ft. in height. About the middle of Discovery Passage are the famous *Seymour Narrows*, 2 M. long and $1\frac{1}{2}$ M. wide, through which the water rushes with great velocity (sometimes as high as 12 knots per hour).

Discovery Passage is succeeded by **Johnstone Strait*, another similar channel, 55 M. long and 1-3 M. wide, between Vancouver Island on the left and the mainland itself, or islands hardly distinguishable from it, on the right. The *Prince of Wales Mts.*, on Vancouver Island, reach a height of about 4600 ft.; and the white summits of the *Cascade Range* rise to the right beyond the lower intervening hills. The varied beauty of the scenery cannot easily be indicated in words, but few travellers will be weary of the panorama unfolded before them as the steamer advances. — Beyond Johnstone Strait we thread the shorter *Broughton Strait* (15 M. long), between Vancouver and *Cormorant* and *Malcolm Islands*. On Cormorant Island lies the Indian village of *Alert Bay*, with a salmon-cannery, a native graveyard, and a totem-pole (see p. 297). The conical summit to the left is *Mt. Holdsworth* (3040 ft.).

On emerging from Broughton Strait, we enter *Queen Charlotte's Sound*, which is 10-30 M. wide and contains many islands, mostly adjoining the mainland. On the shore of Vancouver lies *Fort Rupert*, an old post of the Hudson Bay Co., with an Indian village. A little later we pass through *Goletas Channel* and then say farewell to Vancouver Island, the N. point of which, *Cape Commerell*, we leave to the left. For a short time (40 M.) we are now exposed to the swell of the Pacific Ocean, but this is seldom enough in summer to cause uneasiness even to bad sailors. To the N.W., in the distance, loom the large *Queen Charlotte Islands*, the chief home of the *Haidas*, the cleverest of the native-tribes of this coast (comp. p. 297). A full account of the islands is given by *Dr. George M. Dawson* in the Report of the Canadian Geological Survey for 1879.

Our course now hugs the mainland and leads at first through **Fitzhugh Sound*, a deep and narrow channel, the W shore of which is formed by a continuous series of islands. The sharp peak of *Mt. Buxton* (3430 ft.) rises on *Calvert Island*. As we near the N. end of the Sound the scenery becomes very grand, huge snowy peaks towering above the pine-clad hills that line the channel. Beyond the large *Hunter's Island* we turn sharply to the left and enter the extremely narrow and winding **Lama Passage*, between it and *Denny Island*. On *Campbell Island*, to the left, is the Indian village of *Bella Bella*, opposite which is a graveyard, with totem-poles (comp. p. 297). Farther on we pass through the wider *Seaforth Channel* and reach *Millbank Sound*, the only other point on the voyage where

we are exposed for a brief interval to the waves of the open sea. Beyond this sound we enter *Finlayson Channel*, 24 M. long and 2 M. wide, between the large *Princess Royal Island* (48 M. long and 25 M. wide) and the mainland. Numerous fjords, short and long, run into the mainland, and several high waterfalls descend from the cliffs. *Finlayson Channel* is continued by *Tolmie Channel*, *Graham Reach*, and *Frazer Reach*, beyond which we pass through *McKay Reach*, between the N. end of *Princess Royal Island* and *Gribbel's Island*, into *Wright's Sound*. Behind *Gribbel's Island* are the channels leading to **Gardner Canal*, one of the grandest and gloomiest fjords on this coast. From *Wright's Sound* we enter **Grenville Channel*, which runs for 50 M. in an almost perfectly straight line between *Pitt Island* and the mainland. It is flanked on both sides with steep mountains 1500-3500 ft. high, while still higher mountains rise in the background to the right. At places the channel is only a few hundred feet wide. Signs of glacier-action are seen on the more distant mountains, while the courses of long by-gone avalanches may be traced by the light-green streaks of the younger growth of trees. Crossing an expansion of *Grenville Channel*, we next enter the short *Arthur Passage*, between *Porcher Island* (1.) and *Kennedy Island* (r.), which leads to *Malacca Passage* and the wide *Chatham Sound*. To the right, near the mouth of the *Skeena River*, lies *Port Essington*. Along the *Skeena* are scattered innumerable salmon-canneries. The E. side of the Sound is bounded by the large *Chum-sy-an* or *Tsimpsean Peninsula*, which is connected with the mainland by a very narrow neck of land. On this lie *Prince Rupert*, the proposed terminus of the new Grand Trunk Pacific Railway (comp. p. 307), and *Old Metlakalla*, the scene of Mr. Wm. Duncan's interesting experiences in educating the natives (see p. 298) and now a missionary-station of the Episcopal Church of Canada. Higher up is *Port Simpson*, a station of the Hudson Bay Co., established in 1831. On the small island, opposite the Fort, is an interesting village of *Tsimpsean* Indians, who have attained a high measure of civilization and prosperity. The *Nasse River*, a little to the N. of the *Tsimpsean Peninsula*, is the chief scene (in spring) of the catch of the 'oulichan' or candle-fish (*Thaleichthys Pacificus*), which furnishes the natives with the means of artificial light. It is so full of oil that, when dry and furnished with a wick, it burns like a candle. To the left lie the *Dundas Islands*, opposite the northernmost of which opens *Portland Inlet*. Just here we cross the boundary-line between the British and American possessions (54° 40' N. lat., the famous 'fifty-four forty or fight' of 1843) and enter *Alaska*†. To the left opens *Dixon Entrance*, between *Graham Island* (S.) and *Prince of Wales Island* (N.).

† The exact boundary between Alaska and Canada was not definitely settled till Oct., 1903, when it was determined by a Commission, meeting in London and composed of delegates from the United States, Great Britain, and Canada. Iron pillars, at intervals of about 1½ M., have been erected to mark the frontier. Comp. Map.

The territory of Alaska received its name from Charles Sumner in a speech addressed to the Senate in favour of the purchase of the territory. It is a corruption of an Aleut word referring to the continent as distinguished from the Aleutian islands. The boundaries of the territory comprise the continent and islands adjacent, to the W of 141° W. lon., and also a strip to the W. of a line drawn parallel to the coast from the vicinity of Mt. St. Elias (p. 306) in a S.E. direction to the N. extreme of Portland Canal, through the canal in mid-channel, and westward to the ocean on the parallel of $54^{\circ}40'$ N. lat. The W. limits of the territory, to the N. of the Pacific Ocean, include the Aleutian chain, the islands of Bering Sea, and the eastern of the two Diomed Islands in Bering Strait.

The territory is divisible by its physical characteristics into several diverse regions. The *Sitka Region*, including the coast and islands to Cook's Inlet on the N. and the Kadiak group on the W., has a rough and mountainous topography with many glaciers, a bold sea-coast, numerous fjords and islands, a moist, cool, and equable climate, and a dense covering of chiefly coniferous forests. — The *Aleutian Region* includes the peninsula of Alaska, the Aleutian chain, and the Pribiloff or Fur-seal Islands. It also has a cool and equable climate, with much fog and wind but less rain than in the Sitka region. It consists of broad level areas with numerous clusters of mountains, few glaciers, many volcanic cones, many harbours and anchorages; and, while totally destitute of trees, nourishes luxuriant crops of grass, herbage, and wild flowers. The Aleutian chain represents an old line of fracture in the earth's crust, and, contrary to the usual idea, a large proportion of the islands are not volcanic but composed of crystalline or sedimentary rocks. — The *Yukon Region* includes the mass of the continent to the N. of the great peninsula, which has on its N. border true Arctic conditions, on its W. shores a mild summer and an Arctic winter, and in the interior a hot short summer and a dry cold winter, much like that of Minnesota. It is a region of *Tundra*: low, undulating ranges of grassy mountains, and extensive, level, more or less wooded river-valleys.

The products of the Sitka region are timber, precious metals, salmon, halibut, and other sea-fish. Petroleum, copper ores, lignitic coal, and extensive beds of marble exist in many places. The Aleutian region produces chiefly fox and sea-otter fur, the fur-seal pelts, and a certain amount of coal. Extensive cod-fisheries are prosecuted along its shores. The Yukon region produces gold, furs, and salmon. A remarkable characteristic of the Territory is that, though bordering on the Arctic Ocean and in the S. teeming with glaciers, it has still never been subjected to the action of a continental ice-sheet, such as have ground down the coasts of the analogous fjord-regions of New England and Norway.

The native inhabitants of Alaska belong to four ethnologic stock-races: the *Eskimo* or *Innuut*, with their special offshoot the *Aleutian* people; the *Haida* Indians of Alaska; the *Thlinkit* stock of the Sitka region, and the *Tinneh* or *Athabaskan* Indians of the great interior region. In all there are between twenty and thirty thousand of these natives, independent, self-sustaining, and mostly well disposed. They are in no direct way related to any of the present Asiatic races as is so often assumed, but, from the evidences of the prehistoric shell-heaps, have occupied the region for many centuries. They live by fishing and hunting; the moose, the caribou, and the salmon, in the interior, and the hair-seal, the beluga, the cod and other sea-fishes, the salmon, and wild-fowl, on the coasts, furnish their chief supplies. The fjords and rivers are their roads; with hardly an exception they are canoe-men everywhere, and throughout the N. drivers of dogs and sledges†.

Among the Thlinkit and Haida people one custom is forced on the attention of all who visit their villages. It is that of erecting what are called *Totem Poles*, which have various significations, the most common being that of a 'genealogical tree'. A man erects one of their large com-

† Reindeer have recently been introduced into Alaska, where they thrive well and have been of great service to the native population.

munal houses, and, in memory of this achievement, puts up in front of it a cedar pole carved with figures emblematic of the totems of himself and his ancestors, one above another. The door of the house is frequently, cut through the base of the pole under the totem of the builder; while above, the successive totems (which by their social laws must change with every generation) appear in the order of remoteness.

The estimated area of the territory is 586,400 sq. M. (thrice that of France), its total population about 35,000+, of which one-seventh are accounted civilized; its chief archipelago, in the Sitkan region, is said to contain 11,000 islands; its total shore-line amounts to some 18,200 M.; its principal commercial port is in about the same latitude as Liverpool; its southernmost islands lie on the parallel of Brussels, its westernmost village is as far W. from the mouth of the Columbia River, Oregon, as Eastport, Maine, is E. from that point; it includes within its boundaries the highest mountains, the most superb glaciers and volcanos in America to the N. of Mexico, and presents the anomaly of a territory with only about one inhabitant to 17 sq. M. which in 20 years has paid more than eight million dollars in taxes. It was transferred by Russia to the United States in 1867 for the sum of \$7,250,000.

To the above paragraphs, which were kindly drawn up for the original edition of this Handbook (1894) by *Dr. Wm. H. Dall*, it may be added that between 1867 and 1904 Alaska exported furs, fish, and gold in about equal values to the amount of \$150,000,000; that it absorbed merchandise from the United States during the same period to the value of \$100,000,000, and that the investments of American capital in the territory amount to about \$25,000,000. — The first election for a delegate to Congress was held in Aug., 1906.

The fullest account of Alaska is contained in the record of the 'Harri-man Alaska Expedition (1899), a work in five huge volumes, written by the various members of the Expedition and profusely illustrated (1903-1904). A more manageable and also authoritative work is 'Alaska and its Resources', by *Dr. Wm. H. Dall*. A good popular account is given in *Miss E. R. Scidmore's* 'Alaska and the Sitkan Archipelago'. See also *A. P. Swineford's* 'Alaska: its History, Climate, and Natural Resources' (1895) and *John S. MacLain's* 'Alaska and the Klondike' (1905).

To the right, as we proceed, juts out *Cape Fox*, with the small station of *Fort Tongas* on an adjacent islet. The steamer next enters the *Revillagigedo Channel*, with *Duke Island* and *Annette Island* to the left. The latter, the largest of the Gravina group (E.), is the seat of *Port Chester*, with the new *Metlakatla*, founded by Mr. Duncan on leaving his original station (see p. 296). To the right, opposite Annette Island, lies the large island of *Revillagigedo*, the chief places on which are *Ketchikan* (usually the first stopping-place of the steamer 'Spokane' after leaving Victoria) and *Loring*, with an important salmon-cannery. Opposite Ketchikan lies the island of *Gravina* (left), and on emerging from the narrow channel separating it from Revillagigedo we enter **Clarence Strait**, which is 100 M. long and 4-12 M. wide and is bounded on the W. by *Prince of Wales Island* (130 M. long and 30 M. wide). This is one of the seats of the Haidas (comp. p. 295) and the steamer sometimes calls at *Old Kasan*, on the E. shore, to allow tourists to see its wonderful totem-poles (75-100 in number, better than those at Wrangell). We are now within what is known as the *Alexander Archipelago*, about 1100 of the islands of which appear on the U. S.

+ Now (1906) about 65,000.

charts, while innumerable small islets are disregarded. The mountains on each side of the strait are fine in size, proportions, and colouring. Near the head of Clarence Strait we steer to the right (E.), between *Etolin Island* (r.) and *Zarembo Island* (l.) and run into—

690 M. (from Victoria) **Wrangell**, situated on the N. end of the island of the same name, opposite the mouth of the *Stikine River*. It was formerly a place of some importance, as the outlet of the Cassiar Mines, but is now a dirty and dilapidated settlement inhabited by about 250 Tlinkits (p. 297) and a few whites. It was named from Baron Wrangell, Russian Governor of Alaska at the time of its settlement (1834). Wrangell was almost wholly destroyed by fire in 1906.

To the tourist Wrangell is of interest as containing a good collection of *Totem Poles*, though their execution is by no means so fine as that of the Haidas (see p. 295). The totems here are 20-40 ft. high. One is surmounted by a bear, another by a head with a 'Tyhee' hat, the badge of a *Shaman* or 'Medicine Man'. A specimen of such a hat, said to be 400 years old, is shown in one of the houses. The old *Graveyard* is so overgrown with vegetation as to be difficult of access and now contains little of typical interest. The carved figure of a bear (or wolf) which surmounted one of the graves now lies on the ground near two totem-poles.

The Tlinkits themselves will interest the visitors, who will at once notice such customs as the blackening of the faces of the girls (said to have for its object the preservation of the complexion) and the wearing of *labrets*, or small plugs of silver, ivory, wood, or bone, in the lower lip. Curiosities of various kinds, including labrets, silver bracelets, carved horn and wooden spoons, reed-baskets, halibut-hooks, gaily painted canoe-paddles, the carved rattles of the Shamans, and fine carvings in slate may be purchased from the natives, and the inquisitive may visit the imperfectly ventilated interior of one of the huts.

At the end of the village farthest from that with the totem-poles are the *Court House* and a *Mission School for Girls*, the teacher of which is glad to give information to interested visitors.

The *Stikine River* is said to receive 300 glaciers, and its scenery is very fine. It was for a time used as one of the routes to the gold mines of the Klondike Region (see p. 303).

Soon after leaving Wrangell we thread our way through the devious * *Wrangell Narrows*, where the channel is marked by stakes and buoys. The shores here are well-wooded, and at places stretches of grass border the water like the lawns of an English country-house. Farther on, in *Soukhoi Channel*, the scenery is of a more majestic character. The mountains on either side, though apparently of no very great height, are covered with snow to within 1000 ft., or less, of the water; and their shapes are very varied and beautiful. One of the most striking is the *Devil's Thumb* (9060 ft.), a peaked monolith recalling the Dolomites of Tyrol. We here see the first glaciers of the voyage (all to the right): the *Le Conte Glacier*, high up on the mountain-side; the larger *Patterson Glacier*; and the *Baird Glacier*, in *Thomas Bay*. About this part of the trip, too, we may meet our first piece of floating ice; while the indescribably beautiful effects of the late sunsets (9-10 p.m.) will rouse even the most sluggish enthusiasm. The huge slopes of *névé*, or hardened snow, are fine.

Soukhot Channel widens into *Frederick Sound*, with *Cape Fan shawe* to the right and *Kupreanoff Island* to the left; but our course soon leaves this sound and carries us to the N. through the long *Stephens Passage*, bounded on the W. by the large *Admiralty Island*. *Holkham* or *Sum Dum Bay*, to the right, has been the scene of some placer-mining. Near the head of the passage, to the right, opens *Taku Inlet*, with its fine glaciers, one of which has a sea-face $\frac{1}{2}$ M. long and 100-200 ft. high. The steamer now usually enters this inlet to afford a close view of this glacier as a substitute for the Muir Glacier (see p. 304). The muddy grey water of the inlet is filled with ice-floes and bergs. The surrounding mountains are of a fantastic, Dolomitic appearance. The chief settlement of Admiralty Island is *Killissnoo*, on its W. coast, with large oil-works. — Just beyond the mouth of the Taku Inlet we enter the pretty *Gastineau Channel*, between *Douglas Island* and the mainland.

890 M. **Juneau** (*Circle City, Occidental; Juneau*), now the capital of Alaska, is situated on the mainland, on a narrow strip of comparatively level ground between the sea and a precipitous, snow-seamed mountain (3300 ft.). Settled in 1880 and named after a nephew of the founder of Milwaukee, it is occupied mainly by miners. In 1900 it contained 1864 inhab., about equally divided between whites and natives or half-breeds. Juneau contains a theatre, several churches, two or three hotels, a woollen-mill and other industrial establishments, and some shops for the sale of Alaskan furs (sea-otter, seal, otter, beaver, bear, musk-rat, fox, etc.; see, however, p. 294) and the famous *Chilkat Blankets*. The last are made of the hair of mountain-goats and coloured with native dyes, but genuine examples, worth \$60-100, are now rare, and most of those offered for sale are of wool and stained with aniline dyes. Juneau supports two newspapers.

About $\frac{1}{2}$ M. to the N. of Juneau is a village of the *Auk Indians*, a curious and primitive, but very dirty settlement, which will repay a visit. The traveller may bargain here for a trip in an Indian canoe. Behind the village is a native *Cemetery*, with curious little huts containing the cremated remains and personal effects of the deceased.

A well-made road leads from Juneau through the highly picturesque **Cañon of the Gold Creek*, with its waterfalls and small glacier, to ($3\frac{1}{2}$ M.) *Silver Bow Mines*, and offers a trip well worth making if time allows. The Silver Bow Basin contains gold-mines of great promise, and both quartz and placer mining are successfully prosecuted.

On Douglas Island, nearly opposite Juneau, is the famous **Treadwell Gold Mine*, at which the steamers generally call. The mine, which is close to the wharf and easily visited, has one of the largest quartz-crushing mills in the world, employing 880 stamps. The quartz does not produce more than \$1.5 of metal per ton, but is so easily and economically worked that the profits are said to be enormous. It is credibly stated that the company that owns it refused \$16,000,000 for the mine, and the gold actually in sight is estimated to be worth 4.5 times as much as the price paid for the entire district of Alaska (p. 298). Many of the best workers in the mine are natives, who earn \$2-3 per day. Many others are Slavs.

As Gastineau Channel has not been charted above Juneau, the steamer now returns to its S. end and then proceeds to the N. through *Saginaw Channel*, on the W. side of Douglas Island. This

debouches on ***Lynn Canal**, a fine fjord extending for 60 M. towards the N. It is flanked with snow-mountains, rising abruptly from the very edge of the water to a height of 6000 ft., and presents, perhaps, the grandest scenic features we have yet encountered. To the right, on *Resurrection Bay*, a little to the N. of *Berner's Bay*, lies *Seward City* (500 inhab.), whence a railway ('Alaska Central Railway') is in contemplation to (ca. 500 M.) *Fairbanks* and other points in the *Tanana District* (see p. 304). About a score of glaciers, large and small, descend from the ravines towards the fjord, among which the *Auk*, *Eagle* (r.), and *Davidson* *Glaciers* are conspicuous. The last-mentioned, near the head of the fjord and on its W. side, spreads out to a width of 3 M. as it reaches the water-level, its front being partly masked by a tree-grown moraine. Passengers are generally landed here for a closer inspection of the glacier.

Lynn Canal ends in two prongs, named the **Chilkoot** and **Chilkat Inlets**, recently come into prominence in connection with the rush to the gold-district of the Klondike. In these inlets the tourist reaches the highest latitude of the trip ($59^{\circ} 10' 36''$ N.; about that of the Orkney Islands, Christiania, and St. Petersburg). At mid-summer there are not more than 3-4 hrs. of partial darkness here.

On the E. bank of Chilkoot Inlet (the E. arm) lies **Skagway** (*Fifth Avenue, Golden North*, from \$2 50), a busy little town of (1900) 3117 inhab., the terminus of the White Pass Railway (see below), now forming practically the only route used in approaching the Klondike and Yukon districts from the coast. It is furnished with hotels, outfitting-establishments, and other accommodations for the miner. The steamer stops here long enough to allow of an excursion to the head of the pass. Good paths lead from Skagway to *Mt. Dewey*, *Denver Glacier*, and various picturesque waterfalls and lakes. — *Dyea*, on the W. bank, was formerly a rival of Skagway, but has been deserted since the opening of the railway. — On Chilkat Inlet lie *Pyramid Harbor* and *Chilkat*, with prosperous salmon-canneries, where are also other settlements on the inlet. This is the district in which the fine Chilkat blankets (p. 300) are made. Good echoes may be wakened off the glaciers.

FROM SKAGWAY TO WHITE HORSE, 111 M., *Pacific and Arctic Railway* (*White Pass and Yukon Route*; narrow-gauge) in 7 hrs. (fare \$20; return-fare to White Pass \$5; through-fare to Dawson from Seattle, Vancouver, or Victoria ca. \$80 during season of navigation). Travellers are strongly recommended to make at least the trip to the summit of the pass and back, as the mountain, cliff, and cañon scenery is very striking, while the construction of the line itself is also interesting. — The line runs through a level wooded coun to to ($4\frac{1}{2}$ M.) *Boulder*, at the foot of the pass, and then begins to ascend rapidly. Farther on the railway has been blasted out of an almost perpendicular wall of living rock, and at ($8\frac{1}{2}$ M.) *Clifton*

the cliffs actually overhang the track. Below, to the right, we see the rushing *Skagway River* and the old trail to the Klondike. Opposite rise the *Saw-Tooth Mts.* At (14 M.) *Glacier* the train is within $\frac{1}{2}$ M. of the great glacier of the Coast Range. We thread a tunnel and cross a cañon by a steel cantilever-bridge 215 ft. high. 19 M. *Switchback.*

20 $\frac{1}{2}$ M. **White Pass** (2885 ft.), grandly situated at the head of the pass and commanding a superb view. It lies on the Canadian frontier and contains both the American and Canadian custom-houses, while the 'Union Jack' and 'Stars and Stripes' float side by side at the station. Small luggage is examined here, and the search for smuggled gold-dust is a great annoyance to the tourist. The waters of *Summit Lake* flow to the Pacific Ocean through the *Skagway River* and to Bering's Sea via the *Yukon*.

We now descend along the *Thompson River*. 32 M. *Log Cabin* was formerly the Canadian customs-station. — 40 $\frac{1}{2}$ M. *Bennett* (2158 ft.; luncheon-station) lies at the S. end of **Lake Bennett**, a narrow mountain-bound sheet of water 27 M. long, the E. bank of which the railway skirts. As we approach (67 M.) *Caribou*, at the N. end of **Lake Bennett**, we cross its outlet, flowing into *Nares* or *Tagish Lake*.

Caribou is the starting-point for a visit to the gold-producing *Atlin District*. A steamer (through-fare to *Atlin* \$10) plies via *Tagish Lake* and *Windy Arm* to the *Taku Arm*, at the foot of *Jubilee Mountain* (ca. 9800 ft.). Stops are made at (59 M.) *Golden Gate* and (74 M.) *Taku City*. A small railway takes us hence along the *Atlin River* to (3 M.) *Scotia Bay*, in **Lake Atlin**, on which another steamer plies to (5 M.) *Atlin* (Grand Hotel, from \$3), on the E. bank of the lake.

The train now follows the *Watson River* to **Lewis Lake**, the level of which was lowered during the construction of the railway. Several other small lakes are passed. 75 M. *Lansdowne*; 88 $\frac{1}{2}$ M. *Robinson*. At (104 $\frac{1}{2}$ M.) *Wigan* a short halt is made to allow a view of **Miles Cañon* (to the right), a ravine $\frac{5}{8}$ M. long, in which the water drops 32 ft., while the current runs at the rate of 15 M. per hour. This cañon and **White Horse Rapids* ($\frac{3}{8}$ M. long), just below it, were frequently dared on raft and scow by the gold-seekers in the early rush to the Klondike.

111 M. **White Horse** (2078 ft.; *White Pass, Imperial*, from \$3), on *Fifty Mile* or *Lewis River*, the present terminus of the railway and the centre of a productive copper-mining district, has become a place of some importance with about 1000 inhabitants.

FROM WHITE HORSE TO DAWSON, ca. 460 M., steamer of the *British Yukon Navigation Co.* in summer in about 40 hrs. (fare \$30-50, meals and berths included).

The steamers, which are comfortable and well appointed, run from about June 1st till the middle of October. The Canadian Government has done much to improve navigation. In winter the traffic is carried on by four-horse sleighs (tri-weekly), which cover the distance of their more

direct route (330 M.) in 5 days (fare \$ 75-100, according to the condition of the trail; 25 lbs. of baggage free, other small articles 30c. per lb.; heavy trunks despatched by freight-sleighs). The nights are passed at clean and fairly comfortable *Road Houses* (meals \$1½; bed \$1, private room extra). Relays of horses are provided every 20-25 M. In the 'between' seasons of spring and autumn, stage-coaches run over the Government trail instead of sleighs. In summer the nights are extremely brief in this district.

About 25 M. after leaving White Horse the steamer reaches *Lake Labarge*, an expansion of the Lewes River, 34 M. in length, flanked with huge red rocks on the W. and gray limestone hills on the E. The next part of the river is very tortuous and is known as *Thirty Mile River*. The scenery is varied, and the banks are covered with wild flowers. On the right we pass (90 M. from White Horse) the mouth of the *Hootalinqua River* and farther on those of the (125 M.) *Big Salmon River* and the *Little Salmon River*. *Carmack* (160 M. from White Horse) lies at the mouth of the last-named river, and to the right rises *Tantalus Butte*. A little farther on we shoot the *Five Finger Rapids*, where the river is little more than twice as wide as the steamer. About 6 M. below are the *Rink Rapids*.

282 M. *Fort Selkirk*, founded by the Hudson Bay Co. in 1850, lies at the confluence of the Lewes and the *Pelly River*, the united stream taking the name of *Yukon*. Below Fort Selkirk the river, with its granite bluffs and numerous islands, is more or less imposing. After about 98 M. more the muddy *White River* joins the Yukon on the left, while the *Stewart* and the *Indian River* come in on the right farther on. Just before reaching Dawson we pass the mouth of the famous *Klondike River* (right).

460 M. **Dawson** (*Regina, Fairview*, from \$4; U. S. and Ger. Consuls; Fr. Agent), founded in 1896 on the right bank of the Yukon, at its confluence with the *Klondike*, is the capital of *Yukon Territory* (p. 253) and the centre of the **Klondike Mining Region**†. It is now a bustling little town with about 9000 inhabitants. It was visited by two destructive fires in 1899, but these seem to have been no more than slight temporary checks to its prosperity. Order is excellently maintained by the North-West Mounted Police (p. 253). The total value of the gold produced in the Klondike Region since its discovery in 1896 is estimated at about \$ 120,000,000 (24,000,000*l.*). Dawson lies at the base of the *Dome* (1800 ft.), which affords a splendid *View. Comp. 'Alaska and the Klondike', by Prof. Angelo Heilprin (1899), John S. MacLain's book with the same title (see p. 298), 'Three Years in the Klondike', by J. Lynch (1904), and 'Into the Yukon', by Wm. S. Edwards (Cincinnati; 1904).

From Dawson a railway runs to (12 M.) *Bonanza* or '*The Forks*', in the Klondike District, and the traveller is advised to take this trip for the sake of a sight of the rich 'claims' and placer-miners on the various creeks of the Klondike. If he is lucky, he may have a chance to see a 'clean up'.

† It is said that 'Klondike' is an incorrect form of 'Troandik', an Indian word meaning Hammer Creek and referring to the barrier of poles for catching salmon, hammered by the natives into the ground at the mouth of the river (also known as *Deer* or *Reindeer River*)

From Dawson steamers descend the Yukon all the way to its mouth. About 50 M. below Dawson lies *Cudahy*, at the mouth (left bank) of *Forty Mile Creek*, along the banks of which are situated many of the best mining claims. About 100 M. from Dawson, the Yukon is crossed by the boundary between Yukon Territory and Alaska; and *Eagle City*, near this point, is the contemplated terminus of the railway from Valdez (p. 306). At *Fort Yukon* (380 M. from Dawson) we touch the Arctic Circle. The river now bends to the S.W. — From (700 M.) *Tanana* steamers ascend the *Tanana River* to points in the rich *Tanana District*, including *Fairbanks* (1000 M. from Dawson), which disputes with Nome (p. 306) the position of the most populous place in Alaska (ca. 12,000 inhab.). A railway unites Fairbanks with *Chena* and *Gulmore* — The end of the Yukon steamer route is (1600 M.) *St. Michael's* (see p. 306), a U S military post on an island in *Norton Sound*. Sea-going steamers run hence to (125 M.) *Nome* (see p. 306).

From Skagway (p. 301) the steamer returns to the S. end of Lynn Canal and then bends to the right (N.W.) into *Icy Strait*. Opening off this to the right is ***Glacier Bay**, which extends to the N.W. for about 45 M., with a width contracting from 12 M. to 3 M. The mountains immediately abutting on the bay are comparatively low (4000-7000 ft.), but as we ascend it we enjoy a magnificent *View to the left of the **Fairweather Range**, including (named from left to right) *Mt. La Pérouse* (10,740 ft.), *Mt. Crillon* (15,900 ft.), *Mt. Lituya* (11,830 ft.), and *Mt. Fairweather* (15,290 ft.). The surface of the bay is full of small icebergs and floes detached from the large glaciers which descend into it, and the most careful navigation cannot avoid an occasional bump. At the head of the bay is the wonderful ****Muir Glacier**, the visit to which was, prior to 1899, the grandest single feature of the Alaskan expedition. An earthquake in that year, however, changed the conditions so entirely, by disrupting the glacier and filling the bay with ice, that the steamer cannot now approach nearer than a point 5-10 M. from the face of the glacier.

This stupendous glacier enters the sea with a front $1\frac{1}{2}$ M. wide and 150-200 ft. high, probably extending 700 ft. below the water. Nine main streams of ice unite to form the trunk of the glacier, which occupies a vast amphitheatre, 30-40 M. long. Seventeen smaller arms join the main stream. The width of the glacier when it breaks through the mountains (*Pyramid Peak* to the W., *Mt. Wright* and *Mt. Case* to the E.) to descend to the sea is about 3 M. The superficial area of the glacier is 350 sq. M., or about the same as that of Huntingdonshire (Jostedalshørn in Norway 470 sq. M.). Dr. John Muir was the first to visit the glacier (1879). Prof. G. F. Wright, who explored the glacier in 1886, estimated its rate of movement at 70 ft. per day in the centre and 10 ft. at the sides (an average of 40 ft.), as compared with $1\frac{1}{2}$ -3 ft. at the *Mer de Glace*, but Prof. H. F. Reid, of the Case School of Applied Science (Cleveland, Ohio), who spent the summers of 1890 and 1892 here, found the most rapid movement not more than 7 ft. per day. In August about 200,000,000 cubic feet of ice fall into the inlet daily. Though the glacier thus moves forward at a comparatively rapid rate, investigation shows that it loses more ice in summer than it gains in winter and that its front is retrograding steadily from year to year. It is evident from the general appearance of the enclosing hills that the ice-stream once occupied the whole of Glacier Bay; and numerous features of the moraines and adjacent rocks give proof of more recent retrocession. Vancouver found the bay blocked by a wall of ice in 1794. A visit to the glacier made by Mr. C. L. Andrews in 1903 showed that it had receded about $2\frac{1}{2}$ M. since 1899 and makes it 'not im-

probable that the end of the career of the Muir as a tidewater glacier is at hand'. See the very interesting reports (with maps, etc.) of Prof. H. F. Reid's two expeditions and the article by Mr Andrews in the 'National Geographic Magazine' for Dec., 1903.

The nearest way from Glacier Bay to Sitka would be through *Cross Sound* and down the W. side of *Chichagoff Island*, but to avoid the unpleasantness of an outside passage the steamer returns through *Icy Strait* (p. 304) and *Chatham Sound* (p. 296). About one-third of the way down the latter we diverge to the right through **Peril Strait*, between the islands of *Chichagoff* (N.) and *Baranoff* (S.). This strait is broad at first but ultimately contracts to a width of $\frac{1}{2}$ M., where its wooded hills and islets recall the scenery of *Loch Lomond*. As we approach Sitka we have a fine view, to the right, of *Mt. Edgecumbe* (see below), with its crater half filled with snow.

1320 M. *Sitka* (*Millmore's Hotel*, \$2), down to 1906 the capital of Alaska and seat of the governor, is very beautifully situated on the W. side of *Baranoff Island*, with a fine bay dotted with green islands in front and a grand range of snow-mountains behind. The bay is sheltered by *Kruzoff Island*, with the extinct volcano *Mt. Edgecumbe* (2800 ft.), while immediately to the E. of the town towers *Mt. Verstovara* (3210 ft.). In 1900 Sitka contained 1400 inhab., two thirds of whom were natives. The town was founded in 1804 by Alex. Baranoff, the first Russian governor of Alaska (see *W. Irving's 'Astoria'*). Sitka lies in 57° N. lat. (about the same as that of Aberdeen or Riga) and, owing to the *Kuro Siwo*, or Japanese current, has a milder winter than Boston, in spite of the proximity of eternal snow (mean summer temp. 54°, winter 32°). The temperature seldom falls to zero. The rainfall is very high (ca. 110 inches).

On a height to the right of the dock (fine view) stand the ruins of *Baranoff Castle*, the residence of the Russian governors, burned down in 1894. — Near the head of the main street, leading from the wharf into the town, is the Russo-Greek Church, with its green roof and bulbous spire, which contains some interesting paintings and vestments (small fee charged for admission). Many of the natives and half-breeds are members of the Greek church, and Sitka is the seat of the Orthodox Greek bishop of the United States. Several of the substantial old *Log Houses* of the Russians are still in use. — Turning to the right at the head of the main street and following the road along the beach, we reach the buildings of the *Presbyterian Mission*, where visitors are welcome. The *'Sitka Museum'*, a highly interesting collection of Alaskan products, is installed in a building in the mission-grounds, fitted up like the dwelling of a native chief, with a totem-pole at the entrance. — By passing up between these buildings we reach the *'Indian River Walk'* (a round of about 2 M.), where the visitor with preconceived ideas of Sitka's arctic climate will be surprised to find luxuriant vegetation, fine trees, and a brawling brook, not unlike such typical British walks as the *Torrent Walk* at *Dolgelley*. One of the characteristic plants is the *'Devil's Club'* (*Echinopanax horrida*).

The *Native Village*, or *Rancherie*, lies to the left of the wharf and is occupied by 800-1000 Sitkans, including many interesting specimens such as *'Mrs. Tom'* and *'Sitka Jack'*, who are always at home to steamboat-visitors. Tourists occasionally get up canoe-races among the natives, and exhibitions of native dancing are often arranged for their benefit. Behind the village is the native and Russian cemetery.

Native curiosities may be bought at Sitka comparatively cheap, and a Russian samovar may still occasionally be picked up here. Travellers should also visit the office of the *Alaskan* (10 c.), a weekly paper.

Sitka is the turning-point of our voyage, and we now retrace the way we have come (via Icy Strait, Chatham Sound, Frederick Sound, etc.). The distance to Victoria is about 1100 M., taking 5 days. As a rule few stops are made on the homeward journey; but much fine scenery, previously passed at night, is now seen by daylight. Passengers for the *Canadian Pacific Railway* leave the steamer at Victoria and proceed thence by a smaller steamer to *Vancouver* (p. 284).

Tourists who wish to go farther to the N. may avail themselves of the steamer of the *Alaska Commercial Co.*, which leaves Sitka for *Unalaska* about the 8th day of each month while navigation is open (round trip of 2500 M., taking about a month, fare \$120). This excursion affords splendid views of the St. Elias Alps and the enormous glaciers of the Alaska mainland. The sea is generally smooth in summer. Holders of return-tickets of the Pacific Coast Steamship Co. are entitled to stop over at Sitka and return by a later steamer — Steamers of the *Alaska Pacific Navigation Co.* also ply from Seattle to Sitka and Unalaska.

Steamers now run regularly from Seattle (9 days) and other ports to Nome (*Hotels*) near *Cape Rodney*, about 800 M. to the N. of Unalaska. This is the headquarters of a district in which large quantities of gold have been discovered since 1898 and is the largest town in Alaska, containing 12,488 inhab. in 1900. Steamers to *St. Michael's*, see p. 304. — Other steamers ply to *Valdez*, at the head of *Prince William Sound*, whence a railway is being constructed to *Eagle* (p. 304) to serve the copper-mines of the 'hinterland'.

Mt. Logan (19,539 ft.), for a time believed to be the loftiest mountain in N. America, is situated in Canada, just beyond the Alaskan frontier, to the N. of 60° N. lat. and about 45 M. from the coast. A little to the W. of it is **Mt. St. Elias** (18,024 ft.), first ascended by Prince Luigi of Savoy in 1897. These mountains are nearly 300 M. to the W.N.W. of Glacier Bay (p. 304) and are not visible on any part of the trip above described — **Mt. McKinley** (20,300 ft.), the real monarch of N. American mountains, rises in Alaska about 300 M. to the W. of the international boundary and about 130 M. to the N. of Cook Inlet, in ca. 63° N. latitude. It stands at the watershed of the Yukon (p. 302), the *Kuskokwim*, and the *Susitna* (*Sushitna*), the three greatest rivers of Alaska, and presents on every side a succession of granite cliffs and overhanging glaciers. The largest of the latter are the *Fidèle* and *Ruth* *Glaciers*, on the E. slope, and the *Hanna Glacier*, on the W. On the W. Mt. McKinley rises abruptly out of a low country, 'abounding in big game, but on the E. it is screened by a belt of mountains 8000 ft. in height. From the S.E. it appears like 'a great bee-hive, weighted down with all the snow it can possibly carry'. Mt. McKinley was ascended in 1906 by *Dr. Fred. A. Cook*, accompanied by *Edward Barrille*. The ascent took eight days (Sept. 9-16th).

Grand Trunk Pacific Railway.

The Grand Trunk Pacific Railway Co. was incorporated in 1903 for the purpose of constructing a main line of railway, 3800 M. in length, across Canada from the Atlantic to the Pacific Ocean, besides several branch-lines of considerable importance. At the time this Handbook went to press, no part of this gigantic system had been opened for traffic, though about 1800 M. of it were in course of construction. The undertaking, however, is of such vast and far-reaching importance that any guidebook to Canada would be incomplete that did not give a sketch of it, finished or unfinished.

The line will begin at or near *Moncton* (p. 87), and will traverse the provinces of New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia. It will open a vast country rich in agricultural, timber, and mineral resources, and will provide an additional outlet for the enormous grain-crops of the Canadian North-West, as well as create a new market for the manufactured products of Eastern Canada. It will be a shorter route by several hundred miles than any now existing between Europe and the Far East. For purposes of construction the railway is divided into two great sections; the Eastern Division, extending from the Atlantic to Winnipeg, and the Western Division, reaching from Winnipeg to the Pacific. The Eastern Division will be built at the cost of the Canadian Government and leased to the Grand Trunk Pacific Railway Co. for a period of 50 years, at an annual rent (after the first seven years) of 3 per cent on the cost of construction. The Western Division will be built at the cost of the Company, with the aid of a Government guarantee of its First Mortgage Bonds. The total cost of the Company's share of the undertaking is estimated at \$123,500,000 (24,700,000*l.*). The date fixed for the completion of the whole railway is 1911; but it is expected that some sections of it will be open for traffic in 1907.

As at present contemplated, the railway will run from Moncton across New Brunswick in a N.W. direction, and then traverse the province of Quebec to *Lévis* (p. 157). At *Chaudière Junction*, 5 M. above Quebec, the line will cross the *St. Lawrence* by the largest cantilever-bridge in the world, $\frac{3}{5}$ M. long and 150 ft. above high-water. It will then run back, along the N. bank of the *St. Lawrence*, to *Quebec* (p. 145). From this point the railway will run in an almost direct line to *Winnipeg* (p. 245, 1800 M. from Moncton), passing near *Lake Abitibi* (p. 240) and *Lake Nipigon* (p. 235). This part of its course will be from 80 M. to 120 M. to the N. of that of the Canadian Pacific Railway.

Branch-lines will be constructed from points on the Eastern Division between Quebec and Winnipeg to (ca. 180 M.) *Montreal* (p. 125), to (ca. 300 M.) *North Bay* (p. 233, or *Gravenhurst*, p. 199), and to (ca. 220 M.) *Port Arthur* and *Fort William* (p. 236).

The Western Division is subdivided into the *Prairie Section*, extending to the foot of the Rocky Mts. (1100 M. from Winnipeg),

and the *Mountain Section*, reaching thence to the Pacific coast (700 M.). The country traversed by the *Prairie Section* comprises the great agricultural region of the North-West, which, it is estimated, contains a wheat-growing area largely in excess of that of the United States. From Winnipeg the railway runs at first almost due W., paralleling the Canadian Pacific Railway, but after throwing off a short spur-line to *Brandon* (p. 251), it bends to the N.W. The next branch-line runs to (ca. 70 M.) *Regina* (p. 253). From a point near *Battleford* one branch will run to the N.E. to (ca. 140 M.) *Prince Albert* (p. 253), while another will run to the S.W. to (ca. 220 M.) *Calgary* (p. 256).

Edmonton (see p. 264) will be an important divisional point on the railway. Beyond Edmonton the exact course of the railway has not yet been determined, one of the contemplated routes across the Rocky Mts. into British Columbia running about 150 M. to the N. of the other. The first would cross the *Peace River District* (p. 264), not very far to the S. of the *Little Slave Lake* (p. 264), while the other would strike the *Fraser River* near *Mt. Brown* and ascend along its bank. It is intended to construct a branch-line running to the N.W. to (ca. 800 M.) *Dawson* (p. 303), in the Yukon.

The terminus on the Pacific Coast is situated on the *Chim-sy-an Peninsula* (p. 296), about 25 M. to the S. of *Port Simpson* and the Alaska boundary. It is to be named *Prince Rupert*, after the brilliant nephew of Charles I, who was the first governor of the Hudson Bay Co. (1670), while for at least a century thereafter the great North-West of Canada was known as *Rupert's Land* (comp. p. 247).

INDEX.

- Abbott, Mt 276. 275.
 — Pass 270.
 Abenakis Springs 143.
 Aberdeen 263.
 —, Mt. 270 269.
 Abitibi, Lake 240.
 Abuptic Harbour 82.
 Acadia 53 73 86. etc
 — Iron Works 84
 Acton 141
 Adamsville 88.
 Adela 273.
 Adirondack Junction 16.
 47.
 — Mts. 13. 16. 189. etc.
 Admaston 204.
 Admiralty Island 300.
 Afton 61.
 —, Mt. 279.
 Agassiz 283
 —, Lake 247
 Agincourt 190.
 Agnes Lake 269 270
 Ahmic Harbour 200.
 —, Lake 200
 Ainslie, Lake 66. 63
 Ainsworth 288.
 Airdrie 257.
 Alaska 296.
 Albany 13. 16.
 Albert 48.
 Alberta 255 253. xxvi.
 Albert Cañon 279.
 — Mines 48.
 Alberton 101.
 Alburgh 15
 Alert Bay 295
 Aleutian Islands 297.
 Alexander Archipelago
 298
 — Bay 121.
 Alexandria (Minn) 249.
 — (Ont.) 176.
 — Bay 228
 Alexis 282.
 Alfred 175.
 Algoma 223. 233.
 Algonquin Park 201. 201.
 232.
 Alison's 281.
 Alkali Lake 282
 Allagash River 46.
 Allandale 193 211
 Allumette Lake 232.
 Almonte 281.
 Alpena 77
 Alport 203.
 Alton Bay 18.
 Amherst 85.
 Amherstburg 212
 Amiskwi Falls 271.
 — Pass 271.
 — River 271.
 Amqui 93
 Amsterdam 16.
 Ancienne Lorette 140.
 Andover 40. 24.
 Androscoggin, the 25. 21.
 Angle Peak 273.
 Anglesey 5
 Anguille, Cape 115 103.
 — Hills 123.
 Annapolis 75 79.
 — Basin 76. 75.
 — River 75.
 — Valley 75.
 Annette Island 293.
 Annonciation 175.
 Anse à l'Eau 169.
 Anthracite 253. 262
 Anticosti 3. 91. etc.
 Antigonish 61.
 — Mts 61
 Antwerp 5. 7. 8.
 Apishkaugama, the 234.
 Apohaqui 43
 Appin Junction 207.
 Apple Hill 186.
 Arcadia 80.
 Arcola 250. 253.
 Ardoise, Mt. 71.
 Argyle 80.
 Arichat 65. 64.
 Arisag 61.
 Arizona Junction 262.
 Armstrong 280.
 Arnold's Cove 121.
 Arnprior 203 231.
 Aroostook, the 34. 40.
 — Junction 40.
 Arranmore 3
 Arrowhead 287.
 Arrow Lakes 287.
 — River 252.
 Arthabaska 141.
 Arthur Passage 296.
 Ascot 21.
 Ashcroft 281.
 Ashouapmouchouan, the
 184 liv.
 Ashtnoulou Mts 281.
 Askwith 46.
 Aspotogan, Mt. 78.
 Aspy Bay 69 66.
 Assametquaghan 92.
 Assiniboia 253 255
 Assiniboine, the 245 249.
 251.
 —, Mt 262.
 Aston 140.
 Asulkan Glacier 277
 — Pass 277.
 — Valley 275.
 Asylum 207.
 Athabasca 252 253. 255.
 —, the 264. 266. 282.
 — Lake 264 265.
 — Landing 264 265.
 Athelstan 16.
 Atherley Junction 199.
 Athol 85.
 Atikokan 244.
 Atlin 302.
 — Lake 302.
 Atocas, the 170
 Augusta 24
 Auk Glacier 301
 Aulac 86.
 Anrora 198.
 —, Vale of 198
 Ausable Chasm 13 139.
 Austin 251
 Avalanche Mt. 276 274.
 Avalon 103. 110
 Avon, the 71 72.
 Avondale (Nfd.) 120
 — (N. S.) 61.
 Avonport 72.
 Ayer's Flats 20.
 Aylesford 75.
 — Lakes 75
 Aylmer 182
 —, Lake 21.

- Babel, Tower of 270.
 Baccalieu Island 116.
 Baccaro Point 81.
 Baddeck 66. 63. etc.
 Baden 263.
 Badger Brook 122.
 Bagheera, Mt 278.
 Baie d'Espoir 114.
 — St. Paul 167.
 — Verte 86.
 Baird Glacier 299.
 Baker, Mt 289.
 Bala 203. 201.
 Bald Mt. 40.
 Baldwin 13.
 Balfour 288.
 — Mt 273. 272.
 — Pass 273.
 Balgonie 252.
 Bailcoram 114.
 Balmoral 250.
 Balsam Lake 187.
 Banff 253. 268.
 Bangor 24.
 Bankhead 261.
 Banning 244.
 Barachois (N S) 63.
 — (P. Q.) 90.
 Baranoff Island 305.
 Barkerville 252.
 Bark Lake 204.
 Barnett 18.
 Barney's River 61.
 Barra Strait 63.
 Barrie 198. 190.
 Barrington 80. 81.
 — Passage 80.
 Barry's Bay 204.
 Bartibogue 89.
 Bartlett's Harbour 119.
 Bartonville 212.
 Basin Road 62.
 Bassano 255.
 Bass Lake 232.
 Bath Creek 270.
 Bathurst 89.
 — Harbour 89.
 Batiscan 140. 144.
 —, the 140. 163.
 Batoche 253.
 Battle Harbour 117. 119.
 — Island 117.
 — River 257.
 Bauld, Cape 117.
 Baxter's Harbour 74.
 Bayfield, Mt. 4.
 Bay de Verde 104. 120.
 — of Islands 115. 104.
 122.
 Bays, Lake of 200.
 Bay St. Lawrence 69.
 — Shore 32.
 Baysville 200.
 Bear Creek 277. 274.
 — Hills 257.
 — Island 39.
 — Lake 224.
 — River 76.
 Beaubair Island 88.
 Beauce Junction 21.
 Beauceville 21.
 Beaudet 163.
 Beaudette 244.
 Beauharnois 16. 230.
 Beaumaris 201. 203.
 Beaumont 166. 150.
 Beauport 158. 159.
 —, Lake 161.
 Beaupré 160.
 Beauséjour 243.
 Beaver 262.
 — Brook 89.
 — Dams 211.
 Beaverfoot 272. 273.
 — Range 273.
 Beaver Gate 274.
 — Harbor 42.
 Beaverhill Lake 264.
 Beaver Hills 264. 252.
 Beavermouth 274.
 Beaver River 274.
 Bécancour, the 141.
 Bedford (Man.) 244.
 — (N S) 83. 58.
 — (P E I) 101.
 — Basin 83. 51. etc.
 Bedeque Bay 98. 100.
 Beehive, the 270.
 Beeton 211. 205.
 Begbie, Mt. 280.
 Belair 140.
 Bella Bella 295.
 Belle Isle (Island) 117. 3.
 — — (Straits) 3. 117. etc.
 Belleisle Bay 34.
 Belleoram 114.
 Belle River 207.
 — Rivière 166.
 Belleville (N. S.) 80.
 — (Ont.) 189. 226.
 Bellevue Mt. 161.
 Bell Isle 120.
 Belliveau 82.
 Bellows Falls 15. 17.
 Belly River 266. 257.
 Beloeil 141. 143.
 — Mt. 138. 136. 16. 141.
 Bemis 20.
 Benito 263.
 Bennett 302.
 —, Lake 302.
 Berner's Bay 301.
 Benson, Mt. 291.
 Benton 121.
 Berlin (N H.) 26.
 — (Ont.) 205. 207.
 Berry's Mills 87.
 Berthier 139. 143. 167.
 Berwick 74.
 Bethel 25.
 Bethlehem 20.
 Bett's Cove 116.
 Beverly 19. 24.
 Bic 94. 4.
 — Island 4.
 Biddeford 24.
 Biddle, Mt. 271.
 Bienville 157.
 Big Bay Point 198.
 Bigot (Chât.) 161.
 Big Salmon, the 303.
 Bingham 46.
 Binscarth 251.
 Birch Lake 264.
 — Point 46.
 — River 263.
 Birchy Cove *see* Curling.
 Birtle 251.
 Bisco 234.
 Bishop's Falls 122.
 Bissett 232.
 Blackburn 175.
 Black Cañon (Fraser Riv.) 282. 283.
 Blackhead 113.
 Black Rapids 183.
 — River 182.
 Black's 35.
 Blackville 89.
 Blackwater Junction 190.
 Blaeberry Creek 271.
 Blain 287.
 Blanc Sablon 119.
 Blind River 223.
 Blomidon, Cape 74. 72. 73.
 — Mts. 103.
 Bloody Brook 75.
 Blow-me-down Mts 103.
 Blue Mountain Lake 16.
 — Sea 182.
 Bluff Point 13.
 Boar's Head 34.
 Bobcaygeon 188. 187.
 Boiestown 89.
 Boisbriant (Chât.) 186.
 Boisdale 63.
 Bonanza 303.
 Bonaventure 90.
 Bonavista 116.
 — Bay 121. 116.
 Bonfield 232.
 Bonheur 242.
 Bonne Bay 115. 119.
 — Espérance 119.
 Bonney Mt. 278.
 Bonny River 42.
 Bordeaux 175.
 Boston 17. 6. 19. etc.

- Boston Bar 283
 Bouchard, the 167.
 Boucherville (Ont.) 244
 — (P. Q.) 143.
 Bouchette, Lake 163
 Boularderie Island 67 63.
 Boulder 301.
 Boulogne 8
 Boundary 46.
 — Bay 284
 Bourgeau Mts 259. 262
 Bourg Louis 162.
 Bout-de-l'Isle 143.
 Bow, the 255. 256. 257 etc.
 Bowden 257.
 Bowell 255
 Bow Falls 260
 — Lake 270
 Bowmanville 189.
 Bow Range 268.
 — River Gap 257.
 Boyce 237
 — Lake 237.
 Bracebridge 200 203.
 Brackley Beach 101 100
 Bradford 198.
 Bradore Bay 3.
 Brampton 205
 Brandon (Man) 251 252
 etc.
 — (N Y) 132.
 — Hills 251
 Brantford 213.
 Bras d'Or Channels 67.
 — — Lakes 65 62. 63
 Brattleboro 15
 Bremen 7.
 Bremner 234.
 Breton, Cape 61.
 Bretton Woods 20.
 Brewer's Mills Locks 183
 Bridgeport (Ct) 15.
 — (N. S.) 69.
 Bridgetown 75.
 Bridgewater 79 77. 81.
 Brigham Junction 47
 Brier Island 82.
 Brierley's Brook 61
 Brig Bay 119.
 Brighton 189.
 Briggs 120
 — Junction 120.
 Bristol 40.
 Britannia 182.
 — Cove 120.
 British Columbia 292.
 270. xxvii. x. etc.
 Broadaxe, the 270.
 Broad Cove see
 St. Philip's.
 Broadview 252.
 Brocket 267.
 Brockville 229. 182. etc.
- Brookfield 84
 — Mines 77.
 Brosseau's 14.
 Broughton Strait 295
 Brown's Flat 34.
 — Point 85
 Brownsville 213.
 Brownville Junc. 46.
 Broyle, Cape 113. 104
 Bruce 233. 223.
 Brudenell, the 101
 Bruderheim 264
 Brûlé Lake 201.
 Brundage's Point 34
 Brunswick 24.
 Brunton 266.
 Bryant's Pond 25
 Bryce, Mt. 270.
 Buckhorn Lake 187.
 Buckingham 175 181
 Buctouche 87.
 Bull Rock Lighthouse 6.
 Bulls, Bay of 113
 Bunker Hill 44.
 Burbridge 182.
 Burdett 266
 Burgeo 114 124.
 — Islands 114.
 Burgess, Mt. 272. 271.
 Burn 114. 124.
 Burketon Junction 188.
 Burk's Falls 200.
 Burleigh Falls 187.
 Burlington (Ont.) 209.
 — (Vt) 14 17
 — Beach 210 209
 — Crossing 209. 210.
 Burmis 267.
 Burnaby 234
 Burnt Church 88
 — River 188.
 Burrard Inlet 284 286.
 Burritt's Rapids 183
 Burton 35.
 Burton's 83.
 Bushnell 237.
 Bute Inlet 295.
 Buxton, Mt. 295.
 Buzza's Point 35
 Byng Inlet 223.
- Cabano 95.
 Cacouna 168. 4 94.
 Cadboro Bay 291
 Calais 43.
 Caldwell (N Y.) 13.
 — (Ont) 204.
 Caledonia 77.
 — Springs 174. 185.
 Caledon Mts. 222.
 Calf of Man 2.
 Calf Point 81
 Calgary 256. 257.
- Callander 201.
 Calshot Castle 7
 Calumet (Isl. and Falls)
 232.
 — (P. Q.) 175
 Calvary, Mt 185.
 Calvert Island 295
 Cambridge (Mass.) 17.
 — (Ont.) 182
 Cameron 188
 — Lake 187 188
 Campbell Island 295.
 Campbellton 91
 Campobello Island 44. 22.
 43.
 Canaan 88.
 — River 48.
 Canal Flat 273.
 Canfield 213
 Canmore 258.
 Canning 74.
 Canoe Lake 204.
 Canseau, Strait of 64. 61.
 62.
 Canso 64
 —, Strait of 61 61. 62
 Canterbury 25 39.
 Cantyre, Mull of 5
 Cape Anguille Range 103.
 — Argos 64
 — Breton Island 61. 62.
 — Clear Island 6.
 — Cove 91.
 — Dauphin 67.
 Capelton 20.
 Cap Enfumé 69.
 Cape Porcupine 61.
 — Sable Island 81.
 — Vincent 227.
 Capilano Cañon 286.
 — River 286.
 Caplin 92 90.
 Cap Rouge 144 167.
 — St. Ignace 95
 Caraqueet 89.
 Carberry 251. 262.
 Carbonear 120.
 Cardigan (N.B.) 39.
 — (P.E.I.) 101.
 —, the 101
 Cardston 266.
 Cardwell Junction 211.
 222
 Cariboo District 282.
 Caribou (Ala.) 302.
 — (Me.) 40.
 Carievale 252.
 Carillon 185 139. etc
 Carleton (Baie des Cha-
 leurs) 90. 92.
 — (St John) 32. 23. 28.
 — Junction 231. 182. 136.
 — Place 231.

- Carlstadt 242.
 Carmack 303.
 Carnarvon, Mt. 277.
 Carnsore Point 5.
 Carp 203.
 Carter's 34.
 Cartier 234.
 Cascade, the 253 261.
 — City 233.
 — Mt 262, 258 259. etc.
 — Mts. 282.
 Cascades, the 230, 16.
 Cascapedia Bay 92.
 — River 92.
 Casco Bay 21.
 Cascumpec Bay 101.
 Case Mt. 304.
 Case's 35.
 Casselman 176.
 Cassidy 235.
 Castalia 45.
 Castle Mt 263.
 — — Station 268.
 Castor, the 279.
 Catalina 116. 117. 120.
 Catalone 69.
 Cataract Stream 271.
 Cataqua, the 183. 184.
 Cathedral, the 272.
 Catherine's Pond 62.
 Catskills 13.
 Cattegat 9.
 Caughnawaga 47. 138 230.
 Causapscal 92.
 Cayley 257.
 Cayuga, the 221.
 Cecebe, Lake 200.
 Cedar Hall 93.
 — Rapid 230 16.
 Cedars 34.
 Cemetery Station 100.
 Central Ontario Junction 187.
 Centre Harbor 18.
 Chain Lakes 58.
 Chaleur, Bay 90. 89.
 Chalk River 232.
 Chamberlain 253.
 Chambly 19 139.
 — Basin 19.
 — Canton 19.
 Chambord Junction 164.
 Chamcook Mt. 43.
 Champlain 140 144.
 —, Lake 13 14. etc.
 Chancellor, Mt. 272.
 — Peak 273.
 Channel 115.
 — Islands 8.
 Chantler's 212.
 Chapel Platform 62.
 Chapleau 234.
 Chaplin 254.
 Chaplin Lakes 254.
 Charlemagne 142.
 Charles, the 17.
 Charlesbourg 161.
 Charlo 89.
 Charlotte 227. 226.
 Charlottetown 98. 64. 86.
 — etc.
 Chat, Cape 4.
 Château 119.
 Chateaugay 16.
 Château Richer 160.
 Chater 251 252.
 Chatham (N. B.) 83.
 — (Ont.) 207. 213.
 — Junction 88. 89.
 — Sound 296.
 Chats, Lac des 203.
 Chatsworth 222.
 Chaudière 141. 96. 140.
 —, the 21 141. 144.
 — Falls (Ottawa) 180 184.
 — Falls (P. Q.) 141.
 Cheam Peak 233.
 Chebogue Point 82.
 Chebucto Head 24. 81.
 Chedabucto Bay 64. 61.
 Chelsea 182.
 Chemainus 292.
 Chemong Lake 188.
 — Park 188.
 Chena 304.
 Cheops, Caves of 277.
 —, Mt. 277 274.
 Chepewyan 264. 265.
 Cherbourg 6. 7. 8.
 Chester (N. B.) 46.
 — (N. S.) 78. 81.
 Chesterville 186.
 Cheticamp 63. 60.
 Chicagogoff Island 305.
 Chicoutimi 171. 164 166.
 —, the 172. 166.
 Chieftain, the 270.
 Chignecto Peninsula 86.
 Childwold 16.
 Chilkat 301.
 — Inlet 301.
 Chilkoot Inlet 301.
 Chilliwhack 234.
 Chimney Island 229.
 — Tickle 119.
 Chim-sy-an Pen. 296.
 China Creek 288.
 Chipman 35. 48.
 Chippawa 221 215.
 Christiania 9.
 Christiansand 9.
 Christina, Lake 288.
 Churchbridge 251.
 Ciboux Islands 67.
 Cisco 283.
 Clachnacudainn 279. 280.
 Clairs 95.
 Clandeboye 250.
 Clanwilliam 230.
 Clare, District of 82.
 Clarence Creek 176.
 — Strait 298.
 Clarenceville 15.
 Clarenville 120. 121.
 Clarkboro 263.
 Clark's Crossing 253.
 — Harbour 81.
 Clarkson's 209.
 Clarksville 83.
 Clayton (N. Y.) 184.
 — (Ont.) 228. 226.
 Clear Lake 187.
 Clearwater 16.
 Clementsport 76.
 Cleveland 214.
 Cleveland's 202.
 Clifton (Ala.) 301.
 — (N. S.) 83.
 Clinton 282.
 Clouds, Lakes in the 269.
 Cloutiers Platform 95.
 Clyde, the (N. S.) 81.
 —, — (Scotland) 5.
 Coachman's Cove 116.
 Coal Branch 83.
 Coast Range 282. 295.
 — xl. xli.
 Coaticooke 26.
 Cobalt 238.
 Cobequid Bay 83 84.
 — Hills 85 74.
 Cobocouk 188. 187.
 Cobourg 189 226.
 Cochrane 257.
 Codroy Rivers 115. 123.
 Coe Hill 189.
 Coffin Island 81.
 Colborne 189.
 Coldbrook 48.
 Coldwell 235.
 Coleraine 21.
 Coleridge 255.
 College Bridge 87.
 — Lake 61.
 Collie, Mt. 273 272.
 Collingwood 198 211. 223.
 Columbia, Mt. 270.
 —, the 273. xli. etc.
 — Lake 273.
 — Range 280.
 Colville Harbour 102.
 Comber 212.
 Come-by-Chance 121.
 Commerell, Cape 295.
 Commissaires, Lac des 164.
 Commissioners Lake 163.
 Como 185 174.
 Comox 294.

- Conception Bay 119. 104.
 112 etc.
 Conche 116.
 Concord 17.
 Connecticut Valley 15.
 Connors 95.
 Consolation Valley 270.
 Constable 16.
 Contrecœur 143.
 Conway 19.
 — Junction 19.
 Cookshire Junction 20.
 46 26.
 Copenhagen 9.
 Copper Mt. 268.
 Coquitlan liii.
 Corbeau, Cap 167.
 Cordova Bay 291.
 Cormorant Island 295.
 Cornwall 229. 182. 188.
 Cornwallis, the 74.
 — Valley 74. 73.
 Coteau Junction 176 188
 — Landing 229.
 — Rapid 230. 16.
 Couchiching, Lake 199
 Coudres, Isle aux 167.
 Cougar Brook 277.
 — Mt 279.
 Coulouge (Lake and Fort)
 232
 County Line 79.
 Courtenay Bay 33
 Coutts 266.
 Cowan 263
 Cow Bay 59. 64
 Cowichan 292
 — Lake 292
 Cowley 267.
 Crabbs 123
 Craigellachie 280.
 Craigie Lea 203.
 Craigmere 62
 Craik 253.
 Cranberry Lakes 183.
 — Point 67.
 Cranbrook 267
 Crandall 252.
 Crane Island 167
 — Lake 203
 — — (Sask.) 255
 Crapaud 100.
 Crawford House 20.
 — Notch 20.
 Credit River 205.
 Creignish 62.
 Cressy 226.
 Creston 267.
 Crillon, Mt. 304.
 Crofton 292
 Crookston 249.
 Cross Creek 89.
 — Island 81.
 Cross Point 91.
 — Sound 305.
 Crowfoot 255.
 Crown, the 286
 Crow's Nest 267
 — — Lake 267
 — — Mt. 267.
 — — Pass 267.
 Chrysler 182.
 Cudahy 304.
 Cumberland 184
 — Basin 85. 87.
 Curling 122 119
 Current Island 119.
 Curtis 262.
 Cuxhaven 7.
 Cypress Hills 255.
 Dablon 164.
 Dalhousie 90.
 — Mills 186.
 — Mt. 90.
 Danville 141.
 — Junction 25
 Dark Harbor 45.
 Dartmouth 58. 52. 84.
 —, the 91
 Dauphin 263
 —, Lake 263
 Davenport 198.
 Davidson Glacier 301.
 David Vanwart's 35.
 Dawson 303
 —, Mt. 278.
 Debec Junction 25
 Debert 84
 Deep Cove 45.
 Deer Island 22. 42.
 — Lake 122.
 Delta 251.
 Deltaform Mt. 270. 268.
 Dennis, Mt 272.
 Denny Island 295.
 Dennysville 45.
 Denver Glacier 301.
 Denys River 63. 65.
 Departure Bay 292. 294
 Depot Harbour 204.
 Derby Junction 88
 Des Allumettes, Isle 282.
 Desbarats 233.
 — Islands 233.
 Descent des Femmes 171
 Des Chaleurs, Baie 90. 92.
 Deschambault 140 144.
 Deschênes, Lake 182
 Deseronto 189.
 Despair, Cape 90
 Detour Passage 224.
 Detroit (Mich.) 206 etc.
 — (Minn.) 249.
 — River 206. 212. 214. etc.
 Deutschman's Caves 277.
 Deux Rivières 232
 Devil Island 24
 Deville, Mt. *see* Mt. Sel-
 wyn.
 Devil's Head 43.
 — Thumb (Agnes Lake)
 269.
 — — (Ala) 299.
 Devils Creek 261
 — Gap 262.
 — Head 262.
 — Lake 261.
 Dewey, Mt 301.
 Dexter 24
 Diamond, Cape 144.
 Didsbury 257.
 Digby 76 32.
 — Gut 76
 — Neck 82.
 Dildo Island 116.
 Dingle 58
 Discovery Passage 294
 Dixon Entrance 296.
 Doak 38.
 Doaktown 89.
 Dog Lake 234.
 Doherty 237.
 Dome, the 279.
 Dominion 69.
 Don, the 191
 Donald 274. 279.
 Donegal 3.
 Donkin, Mt 278 277.
 Dorchester 87.
 Dorsaint 95
 Dorset 200.
 Dorval 186. 127.
 — Pass 166
 D'Orville's Head 43
 Doucet's Island 43.
 — Landing 140. 144.
 Douglas (N B) 39.
 — (Ont.) 204
 — Island 300.
 Douglass 287
 Douglstown 91
 Dover (England) 7. 8.
 — (Me.) 24
 Down 2
 Doyle's 123.
 Drumbo 207.
 Drummond Island 224.
 Drummondville 140. 19.
 Dryden 242.
 Drynoch 282.
 Duchesnay, Mt. 272.
 Duck Lake 253.
 — River 263.
 Ducks 281.
 Dudswell Junction 20. 21.
 26.
 Dufferin Hill 281.
 Duke Island 293.

- Duluth 224. 236.
 Duncan's 292.
 Dundalk 232
 Dundas 214 210.
 — Islands 296.
 Dundurn 253
 Dunmore Junction 255.
 266
 Dunsinane 48
 Dursey Island 6
 Dutton 212
 Dwight 200.
 Dyca 301.
 Dyer's 42
 Dysart 188.

 Eagle 242
 — City 304
 — Glacier 301
 — Pass 280.
 — Peak 279.
 — River 280.
 East, Cape 171
 — Angus 21.
 — Chester 78
 Eastern Townships 47.
 Eastman's Springs 176
 Eastport 22. 43.
 East River 78.
 — —, the 60. 59.
 — Selkirk 243. 250.
 — Templeton 184.
 Eboulement, Mt. 167
 Eddy Point 64.
 Eddystone Lighthouse 7
 Edgecumbe, Mt. 305
 Edgington 204.
 Edith, Mt 262.
 Edmonton 264 251. 257
 Edmundston 95 40. 41
 Edwards 182.
 Eel River 90
 — —, the 25.
 Eganville 201. 187 231.
 Egg Island 4
 Eglise Ste. Anne 160
 Egmont, Cape 98.
 Eholt Junction 288
 Ekoba 233
 Elbe, the 7
 Elbow, the 256.
 Eldon 268.
 Elephantus, Mt 18.
 Elgin 48.
 Eli 262.
 Elkhorn 252.
 Elko 267.
 — River 267
 Ellershouse 71.
 Elliot, the 98 100.
 Elora 222.
 Embrun 182.
 Emerald Junction 100.
 Emerald Lake 271
 Emerson 249.
 Emo 244.
 Encampment Island 221.
 Enderby 280
 Enfield 84.
 English 242.
 — Channel 8
 Enterprise 289
 Equinox Mt. 14
 Erie 214
 —, Lake 214 206. xxviii
 Escasoni 65
 Esquimaux 289. 291. 292
 Essex Centre 212
 — Junction 15.
 Esterhazy 252.
 Estevan 252 254
 Etchemin Valley 21.
 Eternity, Cape 170
 Ethelbert 263.
 Etohn Island 299
 Eugenia Falls 222
 Evandale 35
 Evangeline District 73
 Evanston 62
 Everett 284
 Exploits 116. 121
 —, the 103. 121. 116
 Exshaw 257

 Fabyan's 20. 18.
 Fairbanks 301 304.
 Fairholme Mts. 257 261.
 Fairview, Mt 270. 269.
 Fairville 33.
 Fairweather, Mt 304
 — Range 304
 Fairy Lake 200.
 — River 89.
 Falls View 213.
 False Gulch 103.
 Fanshawe, Cape 300
 Fargo (N. D.) 249.
 — (Ont) 212
 Farnham 19. 47
 Farran's Point 183.
 Fairclinton 182
 Fastnet Rock 6
 Father Point 4 93
 Fay, Mt 270
 Fenelon Falls 188. 187.
 Fenton 263
 Fermeuse 113
 Fernie 267
 Ferrona 59.
 Ferryland 113. 114.
 Fidèle Glacier 306
 Field 271. 268.
 —, Mt 272. 271.
 Fife 288
 Fifty Mile River 302
 Fillmore 263.
 Finch 186 182.
 Finlayson Channel 296.
 Finmark 242.
 Fire Island 6
 Fish Creek 253
 Fishel's 123
 Fishers 263.
 Fishkill 13.
 Fish River 277.
 Fitchburg 17.
 Fitzhugh Sound 295.
 Five Finger Rapids 303.
 — Island Lake 71
 — Islands 85 74.
 Flagg's Cove 45
 Fleming 252
 Flesherton 222.
 Florenceville 40
 Flower Cove 119.
 Flushing 8.
 Fogo 116
 Folleigh Lake 85.
 — Valley 85.
 Forbes, Mt. 270.
 Forget 253
 Forbes 255
 Forrest 252
 Fort Beauséjour 86
 — Clarence 56. 58.
 — Coulonge 182 232
 Forteau 119.
 Fort Edward 13
 — Ellice 252
 — Fairfield 40.
 — Frances 244. 243.
 — Garry 250
 — Good Hope 265
 — Kent (Mc.) 46
 — — (N. B.) 95.
 — Lawrence 86
 — — Station 86.
 — McPherson 264 265.
 — Needham 58.
 — Niagara 208
 — Norman 265.
 — Providence 265.
 — Qu'Appelle 262
 — Resolution 265.
 — Rupert 295
 — Saskatchewan 264.
 — Selkirk 303.
 — Simpson 265.
 — Smith 264.
 — Spion Kop 56.
 — Steele 267. 273
 — Ticonderoga 13.
 — Timiskaming 240.
 — Tongas 298
 Fortune 114.
 — Bay 101. 114. 124.
 Fort William 236 226 etc
 — Wrigley 265
 Forty Mile Creek 262.

- Port Yukon 304.
 Foster 47. 19.
 Pourchu, Cape 80 82.
 Fox, Cape 298.
 —, Mt 278.
 — Point 200.
 Foyle, Lough 3.
 Frances, Lake 250
 Francis 253
 Franconia Notch (White
 Mts) 18.
 Franey's Chimney 69.
 Frank 267
 Franklin District 253.
 Fraser 206.
 —, the 282 231 xl etc.
 — Cañon 282
 Fraser's Mt. 60.
 Fraserville 94
 Frazer Reach 296
 Frederick Sound 300.
 Fredericton 36. 25. 29 etc
 — Junction 25. 38.
 French River (N. S.) 60.
 — (Ont) 233.
 — Shore (Nfd.) 107. 115.
 116 124
 — Vale 63.
 Frenchville 95.
 Friar's Head 44
 Frisian Islands 8
 Fryeburg 26.
 Fulton Chain 16.
 — Lakes 16.
 Fundy, Bay of 76 23 28
 33.
 Gabarus 71.
 — Bay 70
 Gaff Topsail 122.
 Gagetown 85.
 Galetta 203.
 Gallops or Galoups Ra-
 pids 229
 Galt 206 205.
 Gambo 121.
 —, Lake 121.
 Gananoque 223 188.
 Gander, the 103 121.
 — Lake 121 104
 Gannet Rock 45
 Gannon Narrows 187.
 Gap Station 257.
 Gardner Canal 296
 Garland 263.
 Garneau Junction 140
 142.
 Garthby 21
 Gaspé, or Gaspé Basin 91
 — Bay 91.
 —, Cape 91.
 —, Peninsula of 90 4.
 Gaspereau, the 73
 Gaspereau Lake 73
 — Valley 73
 Gastineau Channel 300
 Gathnean, 175.
 —, the 134 175. 182
 Geikie Glacier 277
 Gelert 188.
 Genoa 9.
 George, Lake (N. B.) 39.
 —, — (N. Y.) 13
 —, — (St. Mary's River)
 224.
 George's Island 56 24 81
 — River 63.
 Georgetown (Ont) 205.
 210
 — (P. E. I.) 101. 60. 102.
 Georgeville 15.
 Georgia, Gulf of 289. 294.
 292
 Georgian Bay 223. 193.
 224
 Gerrard 289
 Ghost River 262.
 Giant's Causeway 3.
 Gibraltar 9.
 Gibson 33 36. 39. etc.
 Gilbert Plains Junction
 263.
 Gilbert's Island 35.
 Gilfrin 238
 Gillies Limit 238
 Gilmore 304.
 Giroux 244
 Girvin 233
 Glace Bay 63.
 Glacier 302.
 — Bay 304.
 — Crest 278
 — House 274. 268
 Gladstone 251 263.
 Glasgow (Ont.) 203
 — (Scotl.) 5 8.
 Glasier 38.
 Glasier's 36.
 Gleichen 255
 Glencoe 63.
 Glendyer 63.
 Glengarry 59.
 Glenorchy 244
 Glen Robertson 176 174.
 — Station 20.
 — Sutton 18
 Glenwood (Minn.) 249
 — (Nfd.) 121.
 Gloucester 19. 21.
 — Junction 89
 Goat Island 76.
 — Range 262.
 — River 267.
 Goderich 205.
 Gold Creek 300.
 Golden 273.
 Golden Gate 302.
 — Lake Sta. 204.
 — Streams 263
 Gold Range 280. xli.
 Goldstream 292
 Goletas Channel 295
 Golf Links 14
 Goodsir, Mt 273.
 Goodwin Sands 7.
 Goose Island 167.
 Gordon, Mt. 272.
 Gore Bay 223
 Gorham 25.
 Goshen 203.
 Gouffre, the 167
 Grafton (N. B.) 40.
 — (N. D.) 249
 Graham Island 296.
 — Reach 296
 Grand Anse (N. B.) 89.
 — Bank (Nfd.) 114.
 — — (N. S.) 62.
 — Bay 34
 — Discharge 164. 165
 Grandes Isles, Lac des 163.
 — Piles 140.
 Grand Falls (Lab.) 118.
 — — (N. B.) 40
 — — (Nipisiguit) 89.
 — — (St. John) 41
 — Forks (B. C.) 288.
 — — (N. D.) 249.
 — Grève 91
 — Harbor 45
 — Island 221. 216
 — Isle 14.
 — Lake (N. B.) 35 48.
 — — (Nfd.) 122. 104
 — — Station 84.
 — Manau 45 22 43.
 — Manitoulin 224 223.
 233
 — Mere 142.
 — Métis 93
 — Narrows (Cape Breton)
 63. 65.
 — Pré 73.
 — River (Labrador) 113.
 — — (N. B.) 41.
 — — (Ont.) 222
 — — (or Ottawa) 154.
 — — (P. Q.) 90
 Grandview 263.
 Granite Notch 199.
 Granville Ferry 77
 Grassie's 212
 Grates Point 116
 Gratiot Avenue 206.
 Gravel 235.
 Gravenhurst 199.
 Gravina Island 298
 Great Banks (Nfd.) 113.
 104. 6. 9.

- Great Caribou Island 117. Halifax:
- Divide, the 270.
 - Falls 266.
 - Jervois 114
 - Lakes, the xxxvii.
 - Merasheen 114.
 - St. Lawrence 114.
 - Slave Lake 264 265.
 - — River 264.
 - Green, Mt. 278.
 - Greenfield 176.
 - Green Harbour 79. 81.
 - Island 4.
 - Mts 15 14.
 - River 41
 - Greenspond 116.
 - Greenville 46.
 - Greenwich 15
 - Greenwood 288.
 - Grenfell 252.
 - Grenville 142 175 185.
 - Bay 100.
 - Channel 296.
 - Gretna 249.
 - Gribeau, Cap 167.
 - Gribbell's Island 296
 - Griffin Lake 230.
 - Griguet 116.
 - Grimross Canal 35
 - Neck 36.
 - Grimsby 211.
 - Park 211.
 - Grindstone Island 228.
 - Grizzly, Mt. 277.
 - Grondines 144.
 - Grosse Isle (Man) 250.
 - — (P. Q.) 167.
 - Gros Visions, Lac 163.
 - Grotto Mt. 257.
 - Grouse Mt 236.
 - Grues, Isle aux 167.
 - Guelph 205. 206. 207.
 - Junction 206
 - Gull Lake 255
 - Gunflint 236. 241.
 - Gunter Junction 252.
 - Gunter's 35.
 - Guntton 250.
 - Guysboro 61. 59.
 - Habel, Mt. 273. 272.
 - Hagar 233.
 - Hagersville 213.
 - Hague 253.
 - Ha Ha Bay 171.
 - Haileybury 239.
 - Halbrite 254.
 - Halcyon Hot Springs 287.
 - Peak 287.
 - Haldimand Ho. 159.
 - Haliburton 183
 - Halifax 50.
 - Academy of Music 55.
 - Admiralty House 58
 - Amusements 50.
 - Armoury 57
 - Baptist Church 55.
 - Barracks 53 54.
 - Barrington Street 51.
 - 55.
 - Bellevue House 55.
 - Bishop's Chapel 57.
 - Blind School 57
 - Brigade Office 55.
 - Cabs 50.
 - Ch. of Eng. Instit. 55.
 - Citadel 53
 - City Club 55.
 - Hall 55.
 - Clubs 50.
 - Commerce 52.
 - Common, the 57.
 - Consuls 50.
 - County Academy 53.
 - Court House 55.
 - Custom House 51.
 - Dalhousie Coll. 57.
 - 55
 - Deaf and Dumb Asylum 58.
 - Dockyard 56.
 - Dominion Building 54
 - Drill Hall 57.
 - Dry Dock 56.
 - Dutch Church, Old 58.
 - Engineers' Yard 54.
 - Environs 53.
 - Exhibition Buildings 57.
 - Fortifications 53. 51. 56.
 - 57
 - Freshwater 56.
 - Gaol 55.
 - Garrison Chapel 58.
 - Glebe House 55.
 - Government Ho. 54. 55.
 - Granville Street 55.
 - Green Market 55.
 - Halifax Club 54.
 - Harbour 56 21
 - High School 53
 - History 51.
 - Hollis Street 51. 51
 - Holy Cross Cemetery 57.
 - Hospital Yard 56.
 - Hotels 50.
 - Howe Statue 54
 - Industry 52.
 - Information Bureau 51.
 - Lockman Street 55.
 - Long Wharf 56
 - Lumber Yard 54.
 - Marine Hospital 56.
 - Masonic Hall 55.
 - Halifax:
 - Medical College 57.
 - Meth. Churches 57. 58.
 - Military Hospital 58.
 - Narrows, the 56.
 - Ordnance Yard 56
 - Parliament Building 54.
 - Penitentiary 57
 - Point Pleasant Park 56.
 - Poor Asylum 57.
 - Post Office 51. 54.
 - Presbyterian College 54.
 - Provincial Museum 54.
 - Public Gardens 57. 55.
 - Railway Stations 50.
 - 55 56.
 - Restaurants 50.
 - Round Church 58.
 - Sackville Street 53.
 - Sacred Heart Convent 57.
 - St. George's 58.
 - John's 53.
 - Mary's Cathedral 55.
 - — Hall 55.
 - Matthew's 55.
 - Patrick's 53.
 - Paul's 55.
 - — Churchyard 55.
 - Stephen's 57.
 - S. A. Memorial 54.
 - Spring Garden Road 55.
 - 57.
 - Steamers 50.
 - Tramways 50.
 - Universalist Church 53.
 - Victoria Hospital 57.
 - Wanderers' Club 57.
 - Water Street 55
 - Wellington Barracks 53
 - Y. M. C. Association 55
 - Hall's Bridge 187.
 - Harbour 74.
 - Hamburg 7.
 - Hamill's Point 202
 - Hamilton 209. 193 214. etc.
 - Inlet 118.
 - Hamiota 252.
 - Hammond (B. C.) 234.
 - (near Ottawa) 176.
 - Hampstead 35.
 - Hampton (N B) 48.
 - (N. H.) 19.
 - (P. E. I.) 100
 - Beach 19.
 - Hanlan 250.
 - Hanna Glacier 306
 - Hantsport 72.
 - Harbour au Bouche 61.
 - Breton 114
 - Grace 120. 107.
 - Harcourt 88.

- Hare Island 168
 Harlaka Junction 21. 96.
 Harlem, the 11. 12. etc.
 Haro, Canal de 289. 294.
 Harrisburg 214. 205 207.
 Harrison Hot Springs 283
 — Lake 283
 — Mills 283.
 — River 283.
 Harron 288.
 Harry's Brook 123.
 Hartford 15.
 Hartland 40.
 Harvey (N B) 25.
 — (N.S.) 48.
 Harwood 189.
 Hastings 284.
 Hat Creek 281.
 Havelock (N S.) 48.
 — (Ont.) 487.
 Havre 8.
 Hawk 242.
 Hawke Bay 119.
 Hawkesbury (N S.) 62.
 61. 64
 — (Ont) 174. 142 etc
 Hawthorne 182.
 Head Harbor 44.
 Heart's Content 120. 116.
 Heath Point 3.
 Heatherton 61
 Hébertville 166.
 Hector 270. 271. 269
 —, Mt. 270. 268.
 — Lake 270.
 — Pass 271. 268.
 Hedleyville 159.
 Helena 182
 Hehlgoland 7.
 Hellgate Rapid 283.
 Henryville 141.
 Herkimer 16.
 Hermitage, the 162.
 — Cove 114.
 Hermit Range 275.
 Heron Bay 284
 Herring Cove 81.
 Hiawatha Camp 223.
 Highgate Springs 16.
 High Point 171.
 — River 257.
 Hilliard 264.
 Hillsboro 48. 87.
 Hillsborough, the 98 100.
 101.
 — Bay 97. 100.
 Hochelaga 128. 128. etc.
 Hogsback 183.
 Holdsworth, Mt. 295.
 Hole-in-the-Wall Mt 288.
 Holkham Bay 300
 Holland Landing 198
 — River 198
 Hollow Lake 200
 Holyoke 15.
 Holyrood 120
 Hootalinqua River 303.
 Hope 283.
 Hopedale (Labrador) 117
 Hopefield 101.
 Hope Peaks 283.
 Hopewell 59.
 — Cape 87 48
 — — Rocks 48.
 — Hill 48.
 Horse Fly 252.
 Horseshoe Glacier 269
 Horton Landing 73.
 Hot. Champlain Stat 13.
 Hot Springs (Banff) 260.
 Houlton 25
 Howards 123.
 Howe Island 228.
 Howse Pass 271.
 Hubbards 78.
 Huberdeau 175.
 Hudson (N.Y) 13
 — (Ont.) 185 174
 —, the 11 13. 16
 Hudson's Hope 264.
 Hull 180 175. 182
 Humber, the (Nfd., 115
 103. 122
 —, — (Ont.) 191. 198.
 Humboldt 263.
 Hungabee, the 270.
 Hunter Mt. 273.
 — River 100.
 Hunter's Island 295.
 Huntingdon 16
 Huntsville 200
 — Lakes 200
 Hurd, Cape 224.
 Huron, Lake 223 205
 xxxvii.
 Iberville 15. 47. 141.
 Iceboro 24.
 Icy Strait 304. 305.
 Ignace 242.
 Illecillewaet 279.
 —, the 279. 274
 — Cañon 280.
 — Glacier 275. 276
 Incomappleux 277.
 Indian Beach 45.
 — Gardens, the 79.
 — Head 252
 — Lorette 162 161
 — River (Al.) 303.
 — — (Ont.) 201. 203.
 Indiantown (Northum-
 berland, N.B.) 88.
 — (St. John, N.B) 34.
 Inganiche 69.
 Ingersoll 213
 Inglismaldie, Mt. 262.
 259. 261.
 Ingolf 243.
 Ingonish 69.
 Ingornachox Bay 119.
 Insulated Peak 273.
 Invermay 263.
 Inverness 63.
 Iona 63.
 Ironbound Island 81.
 Isherwood 241
 Island Lake 267.
 — Pond 26.
 Isle La Motte 15.
 — Madame 65
 — Royale 225.
 — Verte 94.
 Ivanhoe 187. 189.
 Jack Fish 235.
 Jackson 20
 Jackson's Point 190
 Jacques Cartier River 140.
 144 162.
 Jaquet River 89.
 Jaffray 267
 Jahdebusen 8.
 James Bay 166. etc
 — — Junction 204.
 Janvrin 64.
 Jay Peak 18.
 Jeanotte, the 163.
 Jebogue Point 82.
 Jemseg River 35.
 Jervis Inlet 294.
 Jesus Island 185.
 Jeune Lorette 162 161.
 Jocko 237.
 Joggin's 85.
 — Shore 85.
 John Allen's 35.
 Johnson 238.
 —, Mt. 19. 136.
 Johnstone Strait 295.
 Johnville 40.
 Joliette 142. 139.
 Jones Falls 183.
 Jonquière 166.
 Jordan 211.
 — Pass 280.
 Joseph, Lake 202. 201.
 Jubilee Mt. 302.
 Juddhaven 202.
 Judice 62.
 Juneau 300
 Kabequashesing, Lake
 234
 Kakabeka Falls 242. 236.
 Kaministiquia 242
 —, the 226. 236. 242.
 Kamloops 281.
 — Lake 281

- Kamouraska 95. 168.
 — Islands 168. 95.
 Kamsack 263.
 Kananaskis 257
 — Falls 257.
 Karsdale 77.
 Kashabowiwe 244.
 Kaslo 288.
 Katahdin, Mt 46.
 Katchewanooka, Lake
 187.
 Katrinae 200.
 Kawartha Lakes 187.
 Kazubazua 182.
 Kearney 204.
 Kearsarge, Mt 20.
 Keefers 288.
 Keene 17.
 Keewatin (District) 253
 xxvi. xxx
 — (Ont.) 243.
 Keith 257.
 Kelligrews 120.
 Kelowna 280.
 Kemnay 252
 Kempenfeldt Bay 193.
 Kemptville Junction 182
 186.
 Kenaston 258.
 Kenmou River 118
 Kennebec, the 24. 46.
 Kennebecasis, the 33. 34
 48.
 — Bay 33. 34. 48.
 — Island 34.
 Kennebunk 24.
 Kennedy Island 296.
 Kennetcook 83.
 — River 83.
 Kenogami, Lake 172. 166
 Kenora 243. 244
 Kensington 100.
 Kent Junction 88.
 Kentville 74.
 Keppoch 100.
 Keswick 39
 Ketchikan 293. 298.
 Kettle River 288.
 Kicking Horse Pass 271
 268.
 — — River 271.
 Killaloe 204
 Killarney 223
 Killisnoo 300
 Kilmarnock 183.
 Kilworthy 199.
 Kimball's Lake 200.
 Kimberly 267.
 Kinburn 203.
 Kincardine 205.
 Kineo, Mt. 46.
 King 198.
 —, Mt. 272.
- Kingsclear 39. 38
 King's Cove 116.
 Kingsport 74. 85
 Kingston 227. 184. 187. etc.
 — Creek 34.
 — Junction 189.
 Kingsville 207.
 Kipawa 232.
 Kipp 267.
 Kirkella 252
 Kirkfield 190.
 Kirk's Ferry 182
 Kiskisink 163.
 Kitchener 267
 — Glacier 289.
 Kiwetinok Peak 273.
 Klondike Mining Region
 303. 299
 — River 303
 Kokanee Mt 289
 Komoka 207
 Kootenay, the 288 267.
 xli etc
 — Lake 288.
 — Landing 268 287. 288
 — Rapids 288.
 Kronan 253
 Krucoff Island 305
 Ktaadn, Mt 46.
 Kupreanoff Island 300
 Kuskokwim 306.
 L'Ange Gardien 160.
 L'Anse à Giles 95.
 Labarge, Lake 303.
 Labelle 175
 Labrador 117. 3. 104.
 xxxv.
 Lacadie 14. 47.
 Lac à la Tortue 140
 — au Sable 142.
 — des Arcs 257
 Lachevrotière 140
 Lachine 230 138 186.
 etc.
 — Rapids 230 16 48. etc.
 Lachute 175. 142.
 La Cloche Mts. 223.
 Lady Evelyn Lake 238.
 Ladysmith 292.
 L'Epiphanie 142.
 Laggan 268. 269.
 La Hache, Lac 282.
 — Hague, Cape 8.
 — Have, Cape 81.
 — — Island 79.
 — — River 79. 81.
 Lairet, the 161.
 Lake Clear 16.
 — Edward 163.
 Lakefield 187.
 Lake Frances 250.
 — — Station 250
- Lake Placid 16.
 Lakeport 18.
 Lake Verde 101
 — View 46
 Lamaline 114.
 La Manche 121.
 Lama Passage 295.
 Lancaster 188.
 Lance au Loup 119.
 Langevin 255.
 La Niche 171
 Lanoraie 143
 Lansdowne (Ont) 188
 — (Yukon) 302.
 La Perouse Mt 301
 — Poile 115.
 Laprairie 138.
 Larchwood 234.
 Lardo 239
 Laskie's Landing 34.
 Latchford 238.
 La Tuque 163
 Laurentian or Laurentide
 Mts. 139 95 144. etc.
 Laurentides 163.
 — National Park 163.
 Laurier 140.
 Lavaltrie 143.
 Lavigne 174.
 Lawrencetown 75.
 Leamington 207. 212.
 Leancoil 273
 Leaside Junction 188
 Le Conte Glacier 290.
 Ledge, the 43.
 Leduc 257.
 Lefroy 198
 —, Mt 269.
 — Glacier 269.
 Leitch's Creek 63.
 Lenore 252.
 Lennox Passage 64
 Lennoxville 47. 20. 26.
 Lenox 206
 Leonard 175.
 Lepreaux 42.
 Les Eboulements 167.
 — Ecureuils 144
 Lesqueti Island 294.
 Lethbridge 266.
 Lévis 157. 98. 141. etc.
 Lewes, the 302.
 Lewis Lake 302.
 Lewisporte 121.
 Lewiston 209.
 Liard, the 265. vl.
 Libby's Mills 20.
 Lièvre, the 175. 184.
 Lilloet 281. 282
 Lily Lake 33.
 Limoilou Junction 159.
 161.
 Lindsay 188

- Linko 242.
 Lions, the 286
 Lipton 252.
 L'Islet 95.
 — au Massacre 91.
 Little Bay 116
 — Current 228
 — Dallas 288 289.
 — Falls 16.
 — Hope Island 81
 — Métis 93.
 — River 123.
 — Salmon, the 303.
 — Slave Lake 264
 — Village 160.
 Lituya, Mt. 304
 Liverpool (Eng.) 2. etc.
 — (N.S.) 79. 81
 Livingstone Range 267.
 257.
 Lloydminster 263.
 Lochaber 175.
 Lockeport 79 81.
 Lockport 21.
 Locust Hill 188.
 Logan, Mt. 306.
 Log Cabin 302.
 Logie Bay 112
 Loggieville 89.
 Lomond, Loch 33
 London 207. 205. 213.
 Londonderry (Ire.) 3
 — (N.S.) 84
 Long Branch 209. 191.
 Longford 199.
 Long Island (near Digby)
 82.
 — — (near Wolfville)
 73.
 — — (St. John Riv.) 35.
 — — Sound 15.
 — Lake 84.
 — Range 115. 103
 — Reach 81.
 — Sault Rapids (Ottawa
 River) 185.
 — — (St. Lawrence)
 229.
 Longue Pointe 143
 Longueuil 138. 143.
 Loon Lake 16
 Loop, the (C. P. R.) 279.
 276.
 Lorette (Man.) 244.
 — (P. Q.) 140.
 — Falls 162
 L'Original 185
 Loring 298.
 Lorne Park 209.
 Lorneville Junction 190.
 188.
 Lotbinière 144
 Louisbourg 69. 70 52
 Louise, Lake 269.
 Louiseville 139 143.
 Lowell 17.
 Lower French Village 39
 — Montague 101
 Lubec 22.
 Lucan Crossing 205.
 Ludlow 89.
 Lulu Island 287
 Lumsden 253
 Lunenburg (N. S.) 73. 81.
 — (Vt.) 20.
 Lyell, Mt. 270.
 Lyn 188.
 Lynn 19. 24
 — Canal 301
 Lyster 140 141.
 Lytton 282. 281.
 Maas, the 8.
 Mabou 63
 — Mouth 60.
 McAdam Junction 25 43
 McAlpine's 35.
 McArthur, Lake 271.
 Maccan 85.
 McCreary Junction 263.
 Macdonald, Mt. 278 274.
 Macdowall 253.
 Mace's Bay 42.
 MacGregor 251.
 McKay Reach 296
 Mackay Mt. 236
 MacKenzie (District) 253.
 Mackenzie (Ont.) 235.
 —, Mt. 279.
 —, the 264. 265. 266.
 Mackinac 224. 206 223.
 McKinley, Mt. 306
 McLean 252.
 Macleod 257. 267.
 Macnab's Island 56 24.
 59 etc
 McNutt's Creek 83.
 — Island 81.
 Macoun 254.
 Madawaska 204.
 —, the 34. 95
 Madoc 189.
 Magaguadavic 25.
 —, the 42.
 Maganetawan 200.
 Magdalen, Cape 4
 — Islands 102 60 101.
 — River 4
 Magog 18. 47.
 —, the 47
 — Rapids 47
 Magraith 206.
 Mahone 78. 77.
 — Bay 78. 81.
 Maillard, Cap 167.
 Maitland 83. 84.
 Maizerets 158. 159
 Makaroff 263.
 Makinak 263.
 Makoping, Lake 234
 Malacca Passage 296.
 Malagawatch Harbour 65.
 Malbaie 168.
 Mal Bay 91.
 Malcolm Island 235
 Malfait, Lake 93
 Malin Head 3.
 Malone 16.
 Malpeque 100.
 Manchester (N. H.) 17
 — (Vt.) 14.
 Manhattan Island 11.
 Manilla 190 188.
 Manitoba 246. 215. 213
 xxvi.
 —, Lake 251. 250.
 Manitowaning 223.
 Maniwaki 182.
 Man-of-War Head 44.
 Mansonville 18.
 Manuels 120
 Manvers 188
 Maple Creek 253.
 — Lake 204 202. 203.
 Maquam 18.
 Mara Lake 280.
 Marble Mt. 65 63.
 Marbleton 21.
 Marchand 244.
 Margaree 66. 60
 Margaretsville 75.
 Maria 90 92.
 Marieville 19.
 Marion Lake 276.
 Markdale 222.
 Markham 190
 Markland 80.
 Marquette 251.
 Mars Hill 40
 Marshy Hope 61.
 Mary Lake 200.
 Marysville 38 89.
 Maskinongé 139
 Massachusetts Bay 17.
 Massawippi 20.
 — Lake 21.
 Massive, Mt. 268. 262.
 Matane 4.
 Matapedia 91.
 —, the 90. 93 91.
 —, Lake 93.
 Mattawa 232
 Mattawamkeag 46.
 — River 25.
 Mattawan, the 212.
 Mattawin 244
 Mauderville 35.
 — Island 35
 Maxville 176.

- Mayne Island 291.
 Meadowside 233.
 Meaford 198.
 Mechanicville 13.
 Medicine Hat 255.
 Meductic Rapids 89.
 Meduxnekeag, the 40.
 Medway 79.
 Megantic 46 21.
 —, Lake 46.
 Mekattina, Cape 3.
 Melfort 263.
 Melita 252.
 Melville 101.
 — Island 59.
 — Junction 222.
 Memphremagog, Lake 13.
 20. 139.
 Memramcook 87.
 Meredith 18.
 Merigomish 61.
 Merrickville 133. 186.
 Merrimac, the 18.
 Merritton 241.
 Mersey, the (Eng.) 2. 5.
 —, — (N.S.) 81.
 Metabetchouan, the 164.
 166.
 Metapedia see Matapedia.
 Metapediae 93.
 Metchosin 291.
 Meteghan 82.
 Métis Lakes 93.
 — Rivers 93.
 Metlakatla 298.
 Michel 267.
 — Creek 267.
 Michipicoten 226.
 — Island 226.
 — River 226 234.
 Middle Bay 119.
 — Fork, the 267.
 — Island 35.
 — River 59. 60.
 Middlechurch 250.
 Middleton (N.S.) 75. 77.
 — (Ont.) 235.
 Midland 199. 189. 193.
 Midway 288 280.
 Miguick 163.
 Mile End 175.
 Miles Cañon 302.
 Milestone 254.
 Milford Bay 201.
 Milk River 266.
 —, the 266.
 Millbank Sound 295.
 Millertown 121.
 — Junction 121.
 Mill Stream 92.
 Milltown 43.
 Millville 89.
 Milton (Ont.) 206 210.
- Milton (P.E.I.) 100.
 Milwaukee Junction 208.
 Mimico 209.
 Minas, Bay of 72 83.
 Mine Centre 244.
 Miniota 252.
 Minneapolis 249.
 Minnedosa 251.
 Minnewanka, Lake 261.
 Miquelon 124. 68 114.
 Mira 69.
 Miramichi, the 83. 37. 40.
 Mirror Lake 269.
 Miscou 89 90.
 Miscoche 101.
 Mispec 33.
 Missanable 234.
 Missiguash, the 86.
 Mission Junction 284.
 — Point 91.
 Missisquoi, the 18.
 Mississauga Point 189.
 Mississippi Lake 231.
 — River 231.
 Missouri Coteau 254.
 Mistake, the 34.
 Mistassini, Lake 165.
 —, the 164.
 Mitre Pass 269.
 Moat Mt 19.
 Moberley 273.
 Mobile 113.
 Mohawk Valley 16.
 Moira 182.
 Moisie 4.
 Monadnock, Mt. 17.
 Moncton 87. 48. 77.
 Money Cove 45.
 Monnoir, Mt. 19 136.
 Montana Junction 266.
 Montarville 138.
 Monte, Pointe de 4. 227.
 Montebello 184 175.
 Montfort Junction 175.
 Montmagny 95.
 Montmorency 159.
 — Falls 159. 96.
 Montpellier 15. 18.
 — Junction 15.
 Montreal 125.
 Aberdeen School 137.
 Amusements 126.
 Archbishop's Palace 133.
 Armoury 133.
 Art Gallery 134.
 Bank of Montreal 130.
 Baths 127.
 Blind Asylum 134.
 Board of Trade 137.
 Bonsecours Church 132.
 — Market 132.
 Cabs 126.
- Montreal:
 Cathedral of St James 133.
 Cemeteries 136.
 Champ-de-Mars 131.
 Christchurch Cathedral 133.
 City Hall 131.
 Civic Museum 131.
 Clubs 127.
 Collège de Montreal 135.
 College of Philosophy 135.
 Commerce 129.
 Commissioners St. 132.
 Congregational Coll. 136.
 Conservatorium of Music 136.
 Consuls 127.
 Convents 137.
 Court House 131.
 Custom House 132.
 Dominion Square 133.
 — Ch. 133.
 Dorchester St. 134.
 Environs 138.
 Erskine Ch 135.
 Examining Warehouse 132.
 Exhibitions 127.
 Fraser Institute 133.
 Free Libraries 131. 134. 135.
 Gesù, Church of the 134.
 G. T. Railway Building 132.
 Grey Nunnery 134.
 Harbour 132.
 — Office 132.
 High School 137.
 History 128.
 Hospitals 137.
 Hôtel Dieu 136.
 Hotels 125.
 House of Refuge 134.
 Industry 129.
 Information Bureau 128.
 Jacques Cartier Sch. 137.
 — — Sq 131.
 Jesuit College 134.
 Lacroix House 131.
 Lafontaine Park 137.
 Laval University 138.
 McGill Street 132.
 — Normal School 136.
 — University 135.
 Medical School 138.
 Monklands 137.
 Mount Royal Park 136.

- Montreal:**
 Nat. Hist. Museum 183.
 Newspapers 127.
 New York Insurance Bldg. 131.
 Notre Dame Church 130.
 — de Lourdes 134.
 — Street 131 128.
 Orphan Asylum 134.
 Place d'Armes 130
 Post Office 127. 131.
 Presbyterian Ch. 134
 — College 133.
 Private Houses 133
 Railway Stations 125.
 132 133.
 Ramezay, Chât. de 131
 Redpath Library 135
 — Museum 135.
 Reformatory 134.
 Reservoir 136.
 Restaurants 126.
 St. Andrew's 132.
 — Catherine St. 133
 128 134.
 — George's 133.
 — Helen's Island 137.
 136.
 — James's Ch (Meth.)
 134
 — — — (R. C.) 134.
 — St. 131. 128
 — John's 137.
 — Patrick's 133.
 — Peter's 133.
 — Sulpice, Seminary
 of 130.
 Sherbrooke St. 135.
 Shops 127.
 Skating Rinks 126 133
 Sovereign Bank 137.
 Statue of Bishop
 Bourget 133.
 — — Fulford 133.
 — — Chemer 132.
 — — Macdonald 133
 — — Maisonneuve 131.
 — — Nelson 131.
 — — Queen Victoria
 132. 136.
 Steamers 126.
 Strathcona Hall 136.
 Synagogue 137.
 Telegraph Offices 127.
 Theatres 126.
 Tramways 128.
 Union, the Students'
 136.
 Victoria Bridge 137. 14.
 — College 136.
 — Hospital 136.
 — Square 132.
 Viger Square 132.
 D. ... Canada
- Montreal:**
 Villa Maria Convent
 137.
 War Monument 133
 Wesleyan College 136
 Westmount 135.
 Windsor Hotel 133.
 Y. M. C. Association
 133.
 Montreal Junction 48
 136.
 — Island 133. 185 186
 Mont Tremblant 157.
 Moon River 203.
 Moose, the 76
 — Creek 176.
 Moosehead 46.
 — Lake 46. 24.
 Moose Island 42
 — Jaw 254
 — Lake 237.
 — Mountain District 252
 — River 234.
 Moosilauke, Mt. 18
 Moosomin 252
 Moraine Lake 269 270.
 Morell 101.
 Morley 257 262
 Morris 249. 252
 Morrisburg 229. 188
 Morse 254
 Mortimer's Point 203
 Mosherville 83
 Mountain Creek 274
 Mount Albert 190.
 — Albion 101.
 — Clemens 206
 — Desert 24
 — Hector Lake 270.
 — Stewart 101
 — Uniacke 71.
 Mouse River 251.
 Moville 3. 8.
 Moyie 267
 — Lake 267.
 Mud Lake 183.
 Mudge, Cape 294
 Muir Glacier 304
 Mulgrave 61.
 Muniac 40.
 Murillo 242.
 Murray Bay 168. 95.
 — Harbour 101.
 — River 101.
 Muskoka Lake 201 199
 203.
 — River 200. 201 etc
 — Wharf 200 197. etc.
 Musk-Rat Lakes 231.
 Musquash 42.
 — Islands 35.
 — River 203.
 Myrtle 188 190
 2nd Fair
- Nackawic 39.
 Nain (Labrador) 117.
 Nakusp 287. 289.
 Nanaimo 294. 292.
 Nancy Head 44
 Napanee 189. 187.
 Napinka 249. 250. 252.
 Naples 9.
 Nappan 85.
 Nares Lake 302.
 Nashua 17.
 Nashwaak, the 34. 36. 38.
 etc.
 Nashwaaksis, the 38.
 Nasse River 296.
 Natashquan 4.
 Nat. Belyea's 34.
 Nation River 175 176.
 Natural Steps 159
 Navan 175
 Navesink Highlands 6.
 Navy Island (Niag.) 221.
 — (Passamaquoddy
 Bay) 42.
 Neche 249.
 Needles, the 6.
 Neepawa 263.
 — Junction 263
 Negro Island 81.
 Nelson 288. 289 268.
 —, the 250.
 Nerepis, the 34.
 Net Lake 238.
 Netley 250.
 New Annan 100
 — Bandon 89.
 Newboro 183.
 New Brighton 2.
 — Brunswick 86. 25. 95.
 xxvi
 Newburg Junction 39. 40.
 Newburyport 19. 24.
 New Carlisle 92 90.
 Newcastle (N. B.) 88.
 — (Ont.) 189
 Newfoundland 102 3
 New Germany 77.
 — Glasgow 60.
 — Haven 15.
 Newington 182.
 New Liskeard 239.
 — Liverpool 157.
 Newmarket 198
 Newport (Me.) 24.
 — (N. H.) 18. 15 20.
 — (N. S.) 71
 — (P. Q.) 90.
 New Richmond 90 92.
 — Toronto 209.
 — Westminster 284.
 — Whatcom 284.
 — York 10.
 Niagara, Falls of 116.
 74

- Niagara, Escarpment 224.
 — Falls (N. Y.) 215. 209.
 213. etc.
 — — (Ont.) 215 211 213
 — on-the-Lake 203 213
 — River 216 208. 213. etc
 Nicola 232
 — Lake 232.
 — River 232
 Nicolet 144 140.
 —, the 141 144
 Nicolume, the 233
 Nicomen 284.
 Nictau Lake 40
 Nictaux 77.
 Nictor Lake 40
 Nigadou, the 89.
 Nipigon 235.
 —, Lake 235.
 — Bay 235
 — River 235.
 Nipisiguit, the 89. 40.
 — Bay 89.
 — Falls 40.
 Nipissing Junction 201.
 232.
 —, Lake 233. 201. 237.
 Noel 83.
 Nome 306. 304
 Nominating 175. 142.
 Norman 243.
 —, Cape 103.
 North, Cape 115.
 Northampton (Mass.) 15
 — (N. B.) 39.
 North Battleford 263.
 — Bay 233. 201.
 — Bend 233.
 — Cape 101.
 — Channel 223.
 — Conway 19. 26.
 — End 31.
 Northern Bight 121.
 North Hampton 19.
 — Hatley 20.
 — Head 45.
 — Hero 14.
 — Lake 236.
 — Lubec 22.
 — Mt. 75 74 76. etc.
 Northport 233. 239
 North Portal 254
 — Sea 8
 — Shore 19
 — Stratford 26
 — Sydney 63.
 Northumberland Strait
 97. 61. 64.
 North-West Arm 59 51
 — — River 118
 — — Territories 253
 xxvi.
 North Wiltshire 100.
- North Woodstock 18.
 Norton 48
 — Mills 26.
 — Sound 304.
 Norwood 187.
 Notch Hill 231.
 Notre Dame Bay (Nfd.)
 116 104 121 etc.
 — — des Anges 142.
 — — du Lac 95.
 — — du Portage 95
 Nottawasaga Bay 198
 Nouvelle 92.
 Novar 200
 Nova Scotia 52. xxvi
 xxvii
 Noyan Junction 15. 141.
- Oak Bay (B C) 291.
 — — (N B) 42.
 — —, the 43.
 — Island 78
 — Lake 252
 — Point (Man) 250
 — — (N. B.) 54.
 — River 252.
 Oakville (Man) 262
 — (Ont) 209.
 Ochre River 263.
 Odaray, Mt. 272.
 Oesa, Lake 269.
 Ogden, Mt. 270.
 Ogdensburg 229.
 Ogilvie's Butte 235
 O'Hara, Lake 271. 269.
 Oka 185. 174
 Okanagan Landing 280.
 — Lake 280
 Old Barns 84.
 — Bishop or Bishop's
 Head 45.
 — Kanan 238
 — Lake Road 95
 — Man River 257 267.
 — Metlakatla 296.
 — Orchard Beach 24.
 — Perlican 116
 Olds 257
 Old Smoky Head 69.
 Oldtown 24
 Olympic Mts 289
 Onaping 234.
 Onawa 46.
 One Hundred and Fifty
 Mile House 282
 Ontario, Lake 208. 189.
 191. xxxvi. xxxvii.
 —, Peninsula of 205 193.
 —, Province of 192. xxvi
 xxxvi.
 Opeongo Lakes 204.
 Orangedale 63.
 Orangeville 222. 206.
- Orford, Mt. 18.
 Orillia 149.
 Orleans, Isle of 157. 96.
 145.
 Orme's Head 5
 Oromocto 35
 —, Lake 25.
 —, the 34 35.
 — Island 35.
 Orwell 100
 Oshawa 189
 Osler 253
 Ossining 13.
 Ossipee Mts. 19
 Ostersond 243.
 Oswegatchie, the 229.
 Otnabog 35.
 Otonabee, the 187.
 Ottawa 176.
 Art Gallery 180
 Basilica 180.
 Boer War Monument
 181
 Bridges 179.
 Cabs 176.
 Canal Driveway 131
 Carnegie Library 181
 Cathedral 180.
 Chaudière Falls 180.
 City Hall 181.
 Collegiate Institute 181.
 Consul 177.
 Court House 181.
 Courts, Supreme Law
 179
 Drill Hall 181.
 Environs 182.
 Experimental Farm
 181.
 Fisheries Exhibit 180.
 Gaol 181.
 Geological Museum 179.
 Government Buildings
 177.
 Grey Nunnery 180.
 Hospitals 181.
 Hotels 176
 Kettle Island 152.
 Langevin Block 178
 Lansdowne Park 181.
 Library of Parliament
 178
 Lovers' Walk 179.
 Major's Hill Park 179.
 Ministerial Offices 178.
 Nepean Point 179.
 Normal School 181
 Observatory 182.
 Parliament, Houses of
 178.
 Post Office 177.
 Printing Bureau 180.
 Railway Stations 176

- Ottawa
 Restaurants 176
 Rideau Club 177.
 — Falls 180
 — Hall 180
 Rifle Range 181
 Rockcliffe Park 181
 Sparks Street 177.
 Stanley Institute 181.
 Statue of Bishop
 Guigues 180
 — — Cartier 179.
 — — Macdonald 179.
 — — Mackenzie 179
 — — Queen Victoria
 179.
 Steamers 177.
 Strathcona Park 181
 Sussex Street 179.
 Theatres 177.
 Tramways 176
 University 181.
 Water-Works 181
 Wellington Street 179
 Ottawa, the 181 126 etc
 Ottertail 273 272
 —, the 273
 — Mts 271 273
 Ouatchouan, the 161. 165
 — Falls 161. 165.
 Ovens Head 81.
 — Peninsula 79
 Owen Sound 222. 203.
 Owl's Head 18
 Oxbow 252
 Oxford 85
- Pabineau Falls 89
 Pabos 90
 Painsec Junction 87.
 Pakenham 231
 Palliser Mts 261
 Palmer's Point 31
 Palmvra 21.
 Papineauville 184 175.
 Paradise 75
 — Valley 269 270
 Paris 213.
 Parkbeg 254
 Parkdale (Man.) 250.
 — (Ont.) 205 206. 209 etc.
 Parkhill 205.
 Parrsboro 85 74.
 Parry Island 201.
 — Sound 204. 223
 Partridge Island (N.B.)
 28. 77.
 — — (N.S.) 85.
 Paspébiac 92 90.
 Pasqua 254.
 Passadumkeag 24.
 Passamaquoddy Bay 22.
 44. 45.
- Passumpsic, the 18.
 Patapedia, the 90.
 Patterson Glacier 299
 Paul Smith's 16
 Paul's Peak 281.
 Peace River 264 xl.
 Peachland 280.
 Pearl 285.
 — Lake 163.
 Peechee, Mt 258 259 262
 Peekskill 18.
 Peel 40
 Pelée Island 214
 —, Point 207. 214
 Pelly River 803
 Pembina 249
 Pembroke 231. 182. 204
 Pendleton 175.
 Penetang or Penetang-
 ushene 198
 Penguin Islands 114
 Peninsula 235.
 Pennfield 42
 Penny's Mt 84
 Penobscot, the 24 25. 46.
 Penticton 280.
 Pentland Firth 9.
 Percé 91.
 — Rock 91
 Percival 252.
 Peribonka, the 164
 Peril Strait 305
 Perrot (Isl.) 185 230
 Pertn (N.B.) 40.
 — (Ont.) 183.
 Peterborough 187
 Petitcodiac 48
 —, the 48 87.
 Petite Roche 89
 Petit Nord 103
 Pettapiece 252
 Pettes's Cove 45
 Petty Harbour 113.
 Pic River, the 234
 Pickering 190
 Pictou 189 187.
 Pictou 60 59. 85.
 — Island 97.
 — Landing 60.
 Piedmont Valley 61.
 Pigeon Lake 187.
 — Mt. 257
 Piles Junction 140
 Pilgrim Islands 163.
 Pilley's Island 116 104.
 Pilot, Mt 268 262.
 — Bay 288
 — Butte 252.
 Pincher 267.
 — Creek 267.
 Pine, Cape 114.
 — River 263.
 Pinnacle Mt. 269.
- Pitt Island 295.
 — Lake 281
 — Meadows 284.
 Pitt's Landing 34.
 Placentia 120. 104. etc.
 — Bay 114. 121. 103. etc.
 Plaisance 175.
 Plantagenet 175.
 Plaster Rock 40
 Plattsburg 13
 Pleasant Bay 60.
 — Beach 92
 — Lake 80.
 — Point (Kawartha L.) 187.
 — — (Passamaquoddy
 Bay) 42.
 Plumas 263.
 Plymouth 18
 — Bay 7.
 Pogamasing 234
 Point à Beaulieu 168
 Point Aconi 67.
 — Bourdo 90
 — du Chêne 87 97. 98.
 Pointe à Pic 168
 — aux Anglais 185
 — aux Trembles (Isl. of
 Montreal) 143.
 — — (near Quebec) 144.
 — Bleue 165
 — Brise-Culottes 170.
 — du Lac 139
 — La Boule 170
 — Noire 169.
 Point Enragé 81
 Pointe Roches 171.
 Point La Garde 92
 — Lévis 157 141.
 — Platon 144
 — St Charles 14
 — St. Peter 91.
 — Tupper 61. 62.
 — Verte 121.
 Pokemouche Junction 89.
 Pokok 39
 Pollet River Falls 48.
 Pollux, the 279
 Pomquet 61.
 Ponomah 250
 Ponoka 257.
 Pont Rouge 140
 Pope's Peak 269
 Poplar Point 250
 Porcher Island 295
 Porcupine Hills 237
 Portage 101.
 — Junction 249. 262
 — Lake 202.
 — La-Prairie 251 262
 Port Arthur 236. 226. 244.
 — au-Port 115 101.
 — aux-Basques 115 etc.
 — Blandford 121.

- Port Byng 200
 — Carling 201. 202
 — Chester 298.
 — Clyde 80.
 — Cockburn 203 202. 201.
 — Colborne 211. 191.
 — Credit 209. 191
 — Dalhousie 211. 191.
 — Daniel 90
 — Darling 226.
 — Dover 211
 — Essington 296.
 — Fortune 174.
 — George 75.
 — Hastings 62 61.
 — Henry 13.
 — Hill 101.
 — Hood 63 60
 — Hope 189 226
 — Huron 206 200
 — Joli 81
 — Julian 200.
 — Kent 13
 Portland (Me.) 24 22 25.
 etc.
 — (N. B.) 81.
 — (Ont.) 183.
 — Inlet 296
 Port Latour 81
 — Medway 81.
 — Moody 284. 281.
 — Morien 69
 — Mouton 79. 81.
 — Mulgrave 61.
 — Nelson 250.
 Portneuf 140. 144.
 Port Perry 188
 — Sandfield 202.
 — Saunders 119.
 — Simpson 296
 Portsmouth 19 24
 Port Stanley 213.
 Portugal Cove 112
 Port Union 190
 — Williams 71
 Poughkeepsie 13.
 Powassan 201
 Powell 263.
 Pownal 99.
 Prescott 223. 182. etc.
 President, the 273. 272.
 — Range 271.
 Presque Isle (Me.) 40.
 — (Pa.) 214.
 Preston 207.
 Presumpscot, the 25.
 Prim Point 97.
 Prince Albert 253. 268
 — Edward Island 97. 98.
 xxvi. xxxvi.
 — — Peninsula 183.
 — of Wales Island 298.
 — — Mts. 295.
- Princeport Road 83
 Prince Rupert 296 307.
 Princess Royal Island 296.
 Prince William 89.
 — — Sound 306.
 Procter 289.
 Profile House 20.
 Prospect Hill 18
 Pubnico 80.
 — Harbour 80. 82.
 Pugsley's Island 84.
 Pugwash 85.
 — Junction 85.
 Purcell Range 267
 Purity, Mt 273.
 Purple Springs 266.
 Put-in-Bay Islands 214.
 Pyramid Harbor 301.
 — Peak 301.
 Quaco 48.
 Qu' Appelle 252
 —, the 252. 253
 Quatawamkedgewick,
 the 90
 Quebec 145.
 Abraham, Plains of
 146 154.
 All Saints Chapel 151.
 Amusements 145.
 Archbishop's Palace
 151.
 Athletic Assoc. 151.
 Basilica 151.
 Boswell's Brewery 156.
 Cabs 145.
 Cathedral, Anglican
 151.
 —, R. C. 151
 Cemeteries 155.
 Champlain Market 156
 — Statue 149
 — Steps 155.
 — Street 156.
 Château Frontenac Ho-
 tel 150. 149.
 Chien d'Or Bldg. 151.
 Citadel 149 146.
 — Walk 149.
 City Hall 152
 Clubs 146.
 Congregation, Ch of
 the 150
 Consul 145.
 Côte de la Montagne 155.
 Court House 151
 Cove Fields 151
 Custom House 156.
 Departmental Build-
 ings 153.
 Drill Hall 151.
 Dufferin Terrace 148.
 Durham Terrace 149.
- Quebec.
 Elevator 145 149
 Environs 157.
 Esplanade 150.
 Ferries 145.
 Fortifications 149.
 Franciscan Convent 151.
 Gaol 154.
 Gates 149 150
 Garrison Club 153
 Governor's Garden 149.
 Grand Battery 150.
 Grande Allée 154
 Historical Society 153.
 History 147.
 Hospitals 156 155.
 Hôtel Dieu 152 150.
 Hotels 145.
 Immigration Office 156.
 Laval Mon. 151.
 — University 152. 150.
 Libraries 152. 153.
 Louise Basin 156.
 Lower Town 146 155.
 Martello Towers 151.
 Methodist Church 153.
 Montcalm Market 150.
 Morrin College 153.
 Mountain Hill St. 150.
 155.
 Museums 152.
 Notre Dame des Vic-
 toires 155.
 Observatory 151
 Parliament Building
 153. 150.
 Picture Gallery 152.
 Place d'Armes 151.
 Post Office 145. 151
 Public Park 154.
 Queen Victoria Mon.
 157.
 Railway Stations 145.
 156.
 Restaurants 145.
 Ste Foye Mon 155.
 St. Joseph St 156.
 — Louis St 153
 — Paul St. 156.
 — Peter St. 156
 — Roch 146 156.
 — Sauveur 146. 157.
 Sault-au-Matlot 150.
 Seminary of Q. 152.
 Shops 145.
 Short and Wallick Mon
 151.
 Sillery 145. 155.
 Skating Rink 151.
 Sous-le-Cap St. 156.
 Sous-le-Fort St. 155.
 Spencer Grange 155.
 — Wood 155.

- Quebec:
 Steamers 145.
 Tramways 145.
 Upper Town 146.
 Ursuline Convent 153.
 Victoria Park 156.
 Walls 150.
 War Mon 150.
 Wharfs 145.
 Wolfe Mon. 154 153.
 — and Montcalm Mon. 149.
 Quebec, Province of 148
 3. 91. xxvi.
 — Junction 20. 26
 Queen Charlotte Islands 295.
 — Charlotte's Sound 295
 Queensbury 89
 Queenston 203 218.
 Queenstown 6
 Quesnelle 282.
 — Forks 282.
 Quidi Vidi 112.
 — Lake 112.
 Quilchenna 281.
 Quinté, Bay of 189.
 Quoddy Head 22.

 Rabbit Creek 237.
 — Mt. 242.
 Race, Cape 113 110 4. etc.
 Radnor 257.
 Rainy Lake 201.
 — River 244
 — —, the 243 244
 Raley 266
 Rama 199.
 Rampart, the 279.
 Ramseyville 182.
 Random Island 120.
 Rantem 121.
 Rapid City 251
 Rapide Plat 229.
 Raquette Lake 16.
 Rathlin, Island of 3.
 Rat Portage *see* Kenora.
 Ravensworth 201
 Ray, Cape 115. 103. 124.
 Raymond 266
 Reaux Island 167.
 Red Bay 119.
 — Deer 257.
 — —, the 257.
 — Indian Lake 104.
 — Island 169.
 — Pine 89
 — River 243. 244. 249. etc.
 — Water 237.
 Regina 253. 250.
 Renews 113.
 Renfrew 231. 187 203.
 Bennie 243.

 Rensselaer 13. 14
 Repentigny 143.
 Restigouche, the 90. 37.
 41
 Resurrection Bay 301.
 Revelstoke 279. 287.
 Revillagiedo 298
 — Channel 298.
 Rib Lake 238.
 Rice Lake 187 189.
 Richardson 253.
 Richelieu, the 14. 15. 16.
 19. 47 etc
 Richford 18.
 Richibucto 88
 Richmond 141. 26.
 — Bay 100.
 Rideau, the 176. 177.
 183. etc
 — Canal 177. 179. 183. etc.
 — Lakes 183.
 Ridgetown 212
 Ridout 234.
 Rifle Ranges 209
 Rigaud 174. 185
 Rigolet (Labrador) 117
 118.
 Riley Brook 40
 Rimouski 93. 4
 —, the 93.
 Rink Rapids 303.
 River Denys 63.
 — Glade 48.
 — John 85.
 — Philip 85.
 Riversdale (Lunenburg,
 N.S.) 77.
 — (near Truro, N.S.) 59
 Riverside 48.
 Rivière à Pierre 163. 142.
 — à Rouge 170.
 — aux Pins 162
 — — Rats 163
 — — Sables 166.
 — des Chiens 160.
 — du Loup 94. 168
 — du Sud 95.
 — Ouelle 95 168
 — — Wharf 95.
 Roach's Point 198
 Robbinston 43
 Roberval 164.
 Robinson 302.
 Robinson's 123.
 Robson 288 289.
 Rochester (N.H.) 19.
 — (N.Y.) 21. 183. 227.
 Rockford 222.
 Rockingham 83 58.
 Rock Lake 204.
 Rockland 184. 176.
 Rockliffe 232
 Rockport 24.

 Rockwood 205.
 Rocky Lake 84.
 — Mts. 254. xxxix xli.
 etc.
 — — Park 259. 257.
 — Point 100.
 Rodney, Cape 306.
 Rogers Pass 274. 276.
 — Peak 278 274.
 Rome 21
 Romford 238.
 Roosevelt 244.
 Rosade Iles 4
 Roseberry 289.
 Rose Blanche 115.
 Rosedale 187.
 Rose Head 81.
 Rosenfeld 252.
 — Junction 249.
 Rose Point 204.
 Roseway, Cape 81.
 Rosseau 202. 203. 204.
 —, Lake 202. 201.
 Rossburn 263.
 Rossignol, Lake 79. 77.
 Rossland 288.
 Ross Peak 274.
 — — Siding 279.
 Rossport 235.
 Rosthern 253.
 Rothsay 48 33.
 Rotterdam 8.
 Rougemont 19.
 —, Mt. 16 136. 138.
 Rouleau 254.
 Roundhill 75.
 Round Island 223.
 Rouse's Point 14 176.
 Rousseau's Mill 142.
 Roxborough 237.
 Royal, Mt. 128. 138
 Royalty Junc 100. 101.
 Ruby Creek 234
 Rundle, Mt. 262. 253. etc.
 Rush Lake 254.
 Rushy Pond 122.
 Rusiagornis 33
 Russell (Man.) 251.
 — (Ont.) 182.
 Rustico 100.
 Ruth Glacier 306.
 Rutland 14. 17.
 Rye Beach 19

 Sable, Cape 23
 Saco 24.
 — River 24
 Sackville 86
 Saddle Mt. 270. 269.
 Saginaw Channel 300
 Saguenay, the 170. 165.
 4. etc.
 —, the Little 163.

- St Agapit 141
 — Albans 15. 183. 176.
 — — Head 6
 — Alexandre 95.
 — Alexis 171
 — Alphonse 171.
 — Ambroise 162.
 — Anaclet 93
 — André 95.
 — Andrews 42. 25.
 — — Channel 67
 — — Crossing 42.
 — Anne, Mt 91.
 — — Peninsula of 67
 — — Mts 4
 — Anne's Bay 66.
 — Anselme 21.
 — Anthony 116
 — Arsène 94.
 — Augustin 144.
 — Barnabé Island 93
 — Basil 41.
 — Bernard's 82
 — Boniface 249. 244. etc.
 — Brigidé Road 19.
 — Catharine's (Ont) 241
 — — (P.Q.) 162.
 — — Bay 170.
 — Charles (Man.) 262
 — — (P.Q.) 96
 — —, Cape 119.
 — —, Lake 161
 — —, the 146. 158. etc.
 — Césaire 19.
 — Clair Lake 206 207.
 — — River 206. 207. 227.
 etc.
 — — Tunnel 206
 — Constant 47.
 — Croix, the 43. 25 etc
 — Edward 140.
 — Elias Mt. 306 297.
 — Etienne Bay 170.
 — Eugène 140.
 — Eustache 175
 — Fabien 94.
 — Famille 158
 — Faustin 175
 — Félix de Valois 142
 — Féréol, Falls of 160.
 — Francis, the 26. 34 47
 etc.
 — —, Cape 115.
 — —, Lake 229
 — — de Sales 164.
 — François 96 166. 143.
 etc.
 — —, Cap 171.
 — — Xavier 167.
 — Gabriel 162.
 — — de Brandon 142
 — Gédéon 166.
 — George 42.
- St. George, Bay 115 etc.
 — —, Cape 61.
 — — George's 123.
 — — Bay 61 61
 — — Channel 5.
 — — Lake 123
 — — Germain 140.
 — — de Ramouski 93.
 — — Guillaume 19
 — — Henri 14 138
 — — Hilaire (N B) 95
 — — (P Q) 141. 138
 — —, Mt *see* Beloeil Mt.
 — — Hubert, Lake 94.
 — — Hyacinthe 141 47 140
 — — Irénée 167.
 — — Jacques (Nfd.) 114.
 — — (P. Q.) 142.
 — — Janvier 175
 — — Jean 158 166.
 — — des Chaillons 140.
 141.
 — — Port John 95.
 — — Jérôme (near Lake St.
 John) 166
 — — (in W. Quebec) 142
 175.
 — — Joachim 160.
 St. John (N.B.) 27.
 Amusements 28.
 Banks 30
 Baptist Churches 31.
 Bishop's Palace 31.
 Cabs 27.
 Cantilever Bridge 32
 Carleton 32. 28. 31.
 Cathedral 31.
 Charlotte Street 30 28
 Church of the Assump-
 tion 32.
 City Hall 30.
 — Hospital 31.
 Consuls 28
 Courtenay Bay 31
 Court House 30.
 Custom House 30
 Exhibition Bldgs 30
 Falls of St John 32
 Ferries 28 32.
 Fort Howe Hill 31.
 Gaol 30.
 Germain Street 30, 28
 Harbour 32.
 Hazen Avenue 30.
 High School 31.
 History 28.
 Holy Trinity Church 31
 Hotels 27.
 Incurables, Home for 31.
 Information Bureau 28.
 Jenny's Spring 31.
 King Square 29.
 King Street 30. 28.
- St. John
 Lancaster Heights 32.
 Lily Lake 33 31
 Lunatic Asylum 32
 Madras School 31.
 Market 30
 — Slip 30.
 — Square 30
 Marsh Bridge 31. 33
 Martello Tower 32
 Masonic Temple 31
 Methodist Ch 30. 31.
 Military Grounds 30
 Mt. Pleasant 31 28
 Nat' Inst. Society 31
 Navy Island 32 28.
 New Brunswick Sch.
 32.
 North End 31
 Old Graveyard 30.
 Orphan Asylums 31.
 Post Office 28. 30.
 Prince William St. 30.
 Public Library 30.
 Queen Square 30 28
 Railway Stations 27.
 Reed's Point Wharf 30.
 Riverview Memorial
 Park 33.
 Rockwood Park 33 31.
 St. Andrew's 31
 — David's 31.
 — James's 31.
 — John's 31
 — John the Baptist's 31.
 — Paul's 31.
 — Stephen's 31.
 Seaside Park 32.
 Skating Rink 31.
 Steamers 28.
 Stone Church 31.
 Suspension Bridge 32.
 Tramways 27
 Trinity Church 30.
 Victoria School 31.
 West End 32 23 31.
 Wiggins Orphanage 31.
 York Theatre 31
 Y. M C Association 30.
 St John, the 33 32. 25. 28
 — —, Cape (Nfd.) 116.
 117.
 — —, Lake 164. 199.
 — — John's (Nfd.) 109. 113
 — — (P. Q) 14 15. etc.
 — — Bay 170.
 — — Johnsbury 18. 20
 — — Joseph 96 157.
 — — Island 224.
 — —, Lake 162.
 — — Jovite 175.
 — — Lambert 14. 19. 138.
 141.

- St. Laurent (Man) 250.
 — (P. Q.) 153. 166
 — Lawrence Gulf 3.
 — — River 227 4 185
 142. xxxvi etc.
 — Leonard 140.
 — Leonard's 41
 — Leon Springs 139.
 — Lin 175
 — Louis 83
 — —, Lake 280 186
 — —, the 227.
 — — Isle 170
 — — Rapids 19
 — Marc 143
 — Margaret 175.
 — Margaret's Bay 58. 78.
 81.
 — Martin's 48.
 — — Junction 139 175
 — Mary's (N B.) 38. etc
 — — (Nfd) 114
 — — (Ont.) 205.
 — — Bay (Nfd) 114.
 — — (N. S.) 82
 — — Canal 225.
 — — River (Alb.) 266
 267
 — — (Lake Huron)
 224. 227.
 — — (N S.) 61.
 — Maurice, the 140 etc.
 — Michael's 304 306
 — Michel de Bellechasse
 166. 96.
 — Octave 93.
 — Paschal 95
 — Patrick's Brook 122
 — — Channel (Ire.) 2.
 — — (N S) 65.
 — Paul 249.
 — Paul's Bay 167.
 — Peter, Lake 143
 — Peter's (C B I) 65
 — — (P E I) 102 62
 — — Bay 102
 — — Inlet 65
 — Philippe 47
 — — de Neri 95
 — Philip's 112. 120.
 — Pierre (Montmagny,
 P. Q.) 96.
 — — (Nicolet, P.Q.) 161
 — — (Isle d'Orléans) 158.
 — —, Island of 124 etc.
 — Piran, Mt. 270.
 — Polycarpe Junc. 176
 — Prime 165.
 — Raymond 162
 — Regis 229
 — — Falls 182.
 — Romuald 157. 145.
 — Shott's 114.
 St. Simon 91
 — — Lake 94.
 — Stephen 43 25
 — Sulpice 143
 — Thomas (Ont.) 212
 — — (P Q) 95
 — Tite 142
 — Valier 93 167.
 — Vincent de Paul 139
 Ste Agathe 175
 — Agnes 163
 — Anne 214.
 — —, the 162.
 — — de Beaupré 160
 — — de Bellevue *see* Ste
 Anne du Bout de l'Île.
 — — de la Perade 140.
 144.
 — — de la Pocatière 95
 — — de Saguenay 172 165
 — — du Bout de l'Île 185.
 183 etc.
 — — Falls 160.
 — — Mts 160 166.
 — Cécile du Bic 94
 — Flavie 93
 — Helene 95
 — Julie 141
 — Justine 176
 — Marguerite, the 170.
 — Pétronille de Beaulieu
 153
 — Rosalie 140.
 — Rose 175.
 — Scholastique 175
 — Thecle 142.
 — Thérèse 175
 Salamanca 38
 Salem 19 24
 Salisbury 48
 Salmonier River 120.
 Salmon Lake 93
 — River 119
 — —, the 34 35. 59 etc.
 Saltcoats 251
 Salt Hill 66
 — Springs 85
 Sambro, Cape 24. 81.
 — Island 56.
 Sanbornville 19.
 Sand Lake 286.
 — —, the 183
 Sandon 289.
 Sand Point 231.
 Sandusky 214
 Sandwich Mts 19.
 — River 59
 Sandy Hook 6.
 — Point 115 123
 Sangaree Island 69.
 San Juan Islands 289 294.
 — — de Fuca, Straits of
 289.
 Saranac Inn Station 16.
 — Lake 16
 Saratoga Springs 13
 Sarnia 206
 Saskatchewan 252. 253
 xxvi etc.
 —, the 250 251. 252. etc.
 Saskatoon 253
 Saugeen Peninsula 224
 Sault à la Puce Falls 160.
 — — au-Recollet 133 139.
 — — Ste-Marie (Mich) 224.
 206 234.
 — — (Ont) 224. 206.
 233.
 Savage's Island 84
 Savanne 242
 Savonas 231.
 Sawback 268
 — Range 268
 Saw-Tooth Mts. 302.
 Sawyer Mts. 103.
 Sayabec 93
 Scarborough Heights 190.
 — Junction 190
 Scatarie 69.
 S. heldt, the 8
 Schenectady 16
 Schlosser Landing 221.
 Schooner Cove 44.
 Schreiber 235.
 Scilly Isles 7 8
 Sclater 263
 Scotia Bay 302.
 — Junction 200 204.
 Scotstown 46
 Scottish Village 82
 Scott Junction 20
 Scovill's Point 35.
 Scugog, Lake 188.
 — River 188
 Seaforth Channel 295.
 Seal Cove 45.
 — Island (Bay of Fundy)
 81
 — — (N S) 23
 — Islands 45.
 Seattle 284 287. 306.
 Sebago Lake 26
 Sebec, Lake 46
 Seboois 46
 Sechelt 284
 Secretan 254
 Seguin Falls 204.
 — River 204
 Selkirk 250
 — Mts. 273 275 xli etc.
 — Summit 274 276.
 Selwyn, Mt. 278. 273
 Senneville (Chât.) 186
 Sergeant, Lake 162.
 Serpent Island (L. Simcoe)
 198.

- Serpent River 223.
 Seven Islands (Bay) 4.
 — Persons 266.
 Severn 199.
 Sewell 251.
 Seward City 301.
 Seymour Narrows 295
 Shadow Lake 269.
 — River 202.
 Shakespeare 205.
 Shannonville 189.
 Sharbot Lake 231
 — Junction 187.
 Sharp, Cape 74.
 Shawenegan (or Shawini-
 gan) Falls 140. 142
 — Junction 142.
 Shawnigan Lake 292.
 Shediac 87.
 — Bay 87.
 Sheffield 35.
 — Academy 35.
 Shefford Mt. 19. 186.
 Sheho 251.
 Shelburne 79 81
 Shelby 263.
 Shenacadie 63.
 Shegomoc, the 39
 Sheol, Mt. 270.
 Shepody Bay 87.
 Sherbrooke (N. S.) 61.
 — (P. Q.) 47. 18. 20. 26.
 Shewan 39.
 Shickshock Mts. 90. xxxv.
 Shippegan 89.
 — Island 89. 90
 Shoal Harbour 121.
 — Lake 250.
 Shubenacadie 84.
 Shuswap 281.
 — Lakes 280. 281.
 — River 280
 Sicomous Junction 280.
 Sicker, Mt. 292.
 Sidney 292.
 Sifton Junction 263.
 Signal Hill 111. 109.
 Sillery 155. 144. 145.
 Silver Bow Mines 300.
 Silverdale 212
 Silver Islet 228.
 — Mountain 236.
 — Tip Falls 280
 Simcoe, Lake 198. 188.
 Similkameen District 281.
 283.
 Simpson Pass 268.
 Sing Sing *see* Ossining.
 Sintaluta 252
 Sirdar 263
 Sir Donald, Mt. 277.
 Sissibou, the 82.
 Sitka 305.
 Six-Mile Creek 274.
 Sixteen Island Lake 175.
 Skagway 301.
 — River 302
 Skeena, the 296.
 Skeleton Bay 202.
 — Lake 200.
 — River 202
 Skerries, the 5
 Skiff Lake 25.
 Slate Mts. 268
 Slocan City 283. 289.
 — Junction 288.
 — Lake 289.
 Smelter Junction 288.
 Smith's Falls 186. 182.
 183. etc.
 — Mills 20.
 Smithville 212.
 Snowdon 5.
 Soda Creek 282
 Solent, the 6.
 Somerset 141
 Soo Ship Canal 225.
 Sorel 143. 47. 141.
 Soukhoi Channel 299. 300.
 Soulanges Canal 230.
 Souris (Man.) 251. 250.
 — (P. E. I.) 102 60
 —, the 251.
 Southampton (Eng.) 6. 7. 8.
 — (N. B.) 39.
 — (Ont.) 203.
 South Bay 34
 — Durham 141
 — Edmonton 264 257.
 — Southern Cross 45
 — Head 44.
 South Hero 14.
 — Indian 176.
 — March 203.
 — Mountain 75 76.
 Southport 100. 101.
 South River 200.
 South Vernon 15.
 South-West Head 45.
 Spanish 233
 — River 233. 223
 Sparrow Lake 199.
 Sparwood 267.
 Spear, Cape 103. 113
 Spencer, Cape 77.
 Spence's Bridge 282.
 Spider Lake 46.
 Spillimacheen Valley 279.
 Split, Cape 74.
 — Rock Point 42.
 — — Rapid 230. 16.
 Spokane 289.
 Spoon Island 35.
 Sporting Mountain 62.
 Sprague 244.
 Sprague's Cove 45.
 Spray, the 259. 260. etc.
 — Lakes 262
 Spring Coulee 266.
 — Cove 182.
 Springfield (Mass.) 15.
 — (N. S.) 77.
 Springhill (N. B.) 39. 38.
 — (N. S.) 85.
 Spruce Brook 123.
 Sprucedale 204.
 Spruce Lake 42 33.
 Spuyten Duyvil 13.
 — — Creek 10. 11.
 Spuzzum 283.
 Stadacona 163
 Stair 255
 Stamford 15.
 Stanbridge 16.
 Stanfold 141.
 Stanhope 101.
 Stanley 236.
 — Island 229
 — Junction 244.
 Stanstead 20.
 — Junction 20.
 Stardale 174
 Start Point 7.
 Statue Point 171.
 Stellarton 59.
 Stephen 270.
 —, Mt. 272. 271.
 Stephens Passage 300.
 Stephenville 123.
 Sterritt's 34.
 Steveston 287. 284.
 Stewart River, the 303.
 Stewiacke 84.
 —, the 84.
 — Mts. 84.
 Stikine, the 299.
 Stirling 266.
 Stoco, Lake 187.
 Stonewall 250.
 Stony Creek (B. C.) 274.
 — — (Ont.) 211. 212.
 — Lake (Kawartha L.)
 187.
 — — (near Sundridge) 200.
 — Squaw Mt 259.
 Stouffville Junction 190
 Strassburg 252.
 Stratford 205.
 Strathcona 264. 257.
 Strathlorne 63.
 Strawberry Island 199
 Streetsville Junction 206.
 Sturgeon, the 233.
 — Falls 283.
 — Lake 187. 188.
 Sudbury 233. xliii.
 Suffield 255.
 Sugar Loaf (Antigonish)
 61.

- SugarLoaf (Campbellton) 91.
 —, Mt. (B. C.) 278.
 — Island (L. Huron) 224.
 — (N.B.) 39.
 Sulphur Mt. 262.
 — Mts. 259. 260.
 — Springs (Ottawa) 182.
 Sumas City 284.
 Sum Dum Bay 300.
 Summerland 280.
 Summerside 100. 86. 97.
 Summit Lake 280.
 — Siding 289.
 Sundance Cañon 261.
 Sundridge 200.
 Sunny Brae 59.
 Superior, Lake 225. 234
 xxxvii
 Suseina, the 306.
 Suspension Bridge 21
 Sussex 48.
 Sutherland River 60.
 Sutton 190.
 — Junction 19.
 Swallowtail Head 45.
 Swampscott 24.
 Swan Lake 263.
 — River 263.
 — Valley 263.
 Swansea (B. C.) 267.
 — (Ont.) 209
 Swanzy, Mt. 279.
 Sweet Grass 266.
 Swift Current 254.
 Swiss Peak 274. 278.
 Switchback 302
 Sydenham River 223.
 Sydney 67. etc.
 — Coal Fields 69.
 Sylvester 59.
 Syracuse 21.
 Tableau, Le 171.
 Table Head 67
 Tabusintac 85.
 Tadousac 169.
 Tagish Lake 302.
 Takakkaw Falls 272.
 Taku City 302.
 — Inlet 300.
 Tamagami, Lake 237.
 Tanana 301.
 — District 304. 301.
 — River 304
 Tantalus Butte 303.
 Tantramar, the 86.
 — Marshes 86.
 Tarrytown 13.
 Tatamagouche 85.
 Teeswater 222.
 Temagami 237.
 — Forest Reserve 237.
 Temagami Island 237.
 —, Lake 237.
 Temiskaming, Lake *see*
 Lake Timiskaming.
 Temiscouata, Lake 95.
 Temple, Mt. 270. 268.
 Tennecape Mines 83.
 Ten Peaks, the 270 268.
 269.
 Terminal City 64.
 Terra Nova 121.
 — — River 121.
 Terrebonne 139.
 Tête-a-Gauche, the 89.
 Teulon 250.
 Texada Island 294.
 Thames, the 207. 205.
 Thamesford 207.
 The Brook 175
 Thessalon 233. 223.
 Thetford 21.
 Thief River Falls 249.
 Thirty Mile River 303.
 Thomas Bay 299.
 Thompson, the 281.
 — Cañon 282.
 Thorburn Lake 121.
 Thousand Islands (Saguenay) 165.
 —, Lake of the 228.
 — — Park 228.
 — — Junction 188.
 Three Mile Lake 202. 200.
 — Rivers 139. 141 144.
 — Sisters 257. 258.
 — Valley Lake 280.
 Thunder Bay 226. 235.
 — Cape 226. 235.
 — Hill 273
 Thurso 184. 175.
 — Islands 184.
 Tickle Harbour 119. 121.
 Tiddish 86
 Tignish 101.
 Tilt Cove 116.
 Tilton 120.
 Timiskaming 240. 232.
 — Lake 239. 231. 232 etc.
 Tintamarre Marshes 86.
 Tobin Island 202
 Tobique, the 34. 40.
 Togo 263.
 Tolmie, Mt. 291
 — Channel 296.
 Tonawanda 209.
 Tondern Island 201.
 Topsail 120.
 Torbay 112.
 Torbrook Mines 75.
 Tormentine, Cape 86. etc.
 Toronto 190.
 Allan Gardens 197.
 Amusements 191.
 Toronto
 Annesley Hall 196.
 Arcades 193.
 Armouries 195.
 Art Exhibitions 191.
 Banks 193.
 Bloor Street 192.
 Board of Trade 193.
 Brown Statue 195.
 Cabs 190
 Can. Life Assur. Co. 193.
 Canadian Institute 195.
 — Yacht Club 197. 191.
 Carnegie Library 196.
 Cemeteries 197.
 Churches 197.
 Church Street 194.
 City Hall 194.
 Clubs 191.
 College Avenue 194.
 Collegiate Institute 197.
 Confederation Life Ass-
 soc. Bldg 194.
 Consuls 191.
 Court House 194.
 Custom House 193.
 Deaconesses' Home 194.
 Dental College 196.
 Don, Ravine of the 197.
 Environs 197.
 Episc. College 196.
 Exhibition Grounds 196.
 Forts 196.
 Front Street 193. 192.
 Globe Office 193.
 Government House 196.
 Grange, the 196.
 Grimsby Park 197
 High Park 196.
 History 192
 Hortie. Gardens 197.
 Hospital 197
 Hotels 190.
 Incurables, Home for
 197.
 Industry 192.
 Island, the 197. 191.
 Jarvis Street 192.
 King Edward Hotel 193.
 — Street 193. 192.
 Knox College 195.
 Law School 194.
 Long Branch 197. 191.
 Lorne Park 197. 191.
 Lunatic Asylum 196.
 Macdonald Statue 195.
 Mail-Empire Office 193.
 McMaster Univ. 196.
 Metropolitan Meth. Ch.
 194.
 Mowat Statue 195.
 Munro Park 197.
 Museum 195.

- Toronto
 Music, Conservatory of 196.
 — Hall 194.
 Newspapers 191.
 Normal and Model Schools 194.
 Observatory 196.
 Osgoode Hall 194.
 Parliament Bldg. 195.
 Pharmacy, Coll. of 196.
 Post Office 191. 194.
 Prison 196.
 Public Library 194.
 Queen's Hall 196.
 — Hotel 193.
 — Park 194.
 Queen Street 194.
 — Victoria Statue 195.
 Rail. Stations 190. 193.
 Reformatory 196.
 Reservoir Park 197.
 Restaurants 190.
 Riverdale Park 197.
 Rosedale 192. 197.
 Ryerson Statue 194.
 St. Alban's Cath. 197.
 St. Andrew's Ch. 196.
 — George Street 192.
 — James's Cathedral 193.
 — Lawrence Hall or Market 193.
 — Michael's Cathedral 194.
 — — College 196.
 Schools 197.
 Sherbourne Street 192.
 Simcoe Statue 195.
 — Street 196.
 Steamers 191.
 Technical High Sch. 197.
 Temple Building 191.
 Theatres 191.
 Trade 192.
 Tramways 191.
 Trinity College 196.
 Univ. Avenue 194.
 — of Toronto 195.
 Upper Can. Coll. 197.
 Veterinary College 193.
 Victoria University 196.
 — Park 197.
 Volunteer Mon. 195.
 Wellington St. 192. 193.
 Wychffe College 196.
 Yonge Street 193. 192.
 Toronto Junction 205. 206. 222.
 Tory Island S. 4. 9.
 Touchwood Hills 252.
 Tourmente, Cap 167. 95. 160.
 Tracadie (N. S.) 61.
 — (P. E. I.) 101.
 — (P. Q.) 89.
 — Bay 101. 100.
 Tracadiegash, Mt. 90. 92.
 Tracadie Mills 89.
 Trail 288.
 Traverse, Cape 87. 100.
 Treadwell 184.
 — Gold Mine 300.
 Trent, the 189.
 Trenton 189. 187. 226.
 — Falls 16.
 — Waterway 189. 187.
 Trepassay 111.
 Tring Junction 21. 46.
 Trinity 116. 120.
 —, Cape 170.
 — Bay (Nfld.) 116. 120. etc.
 — — (P. Q.) 171.
 Triton Club 163.
 Trois Pistoles 91. 4.
 — Rivières 139.
 — Saumons 95.
 Trolltinderne, the 273.
 Trout Creek 201.
 — Lake (B. C.) 289.
 — — (Ont.) 283.
 — — City 289.
 Troy (N. H.) 17.
 — (N. Y.) 14.
 — (N. S.) 62.
 Truro 84. 59.
 Tsimpsean Peninsula 296.
 Tuladi, the 95.
 Tunnel 283.
 — Mt. 260. 259. 262.
 Tupper, Mt. 274. 278.
 — Lake Junc. 16. 182.
 — — Village 16.
 Turtle Mt. 267.
 Tuskar Rock Lightho. 5.
 Tusket 80.
 — Islands 82.
 — Lakes 80.
 — River 80. 82.
 Tweed 187.
 Twillingate 116.
 Twin Butte *see* Mt. Mackenzie.
 Two Mts., Lake of the 185. 174.
 Tyrrell's Lake 266.
 Ugg 101.
 Uisge-Ban Falls 66.
 Unalaska 306.
 Ungava (District) 253.
 Upper Rawdon 83.
 Upsala 242.
 Upsalquitch, the 90.
 Upton 141.
 Utica 16. 21.
 Uto Peak 279.
 Utopia, Lake 42.
 Uttersen 200.
 Uxbridge 190.
 Val Morin 175.
 Valcartier 162.
 Valdes Island 291.
 Valdez 306. 301.
 Valleyfield 16. 176. 188. etc.
 Van Buren 46.
 Vanceboro 25.
 Vancouver 284. 290. 291. 306.
 —, North 286.
 — Island 292. 290.
 VanHorne Range 271. 272. 273.
 Vankleek Hill 174. 176.
 Varcoe 251.
 Varennes 143. 138.
 Vassar 244.
 Vauluse 139.
 Vaudreuil 186. 174. 188.
 Vaux, Mt. 273. 272.
 Vogreville 261.
 Venetia 202.
 Verchères 143. 138.
 Verdigris Lake 266.
 Vermilion 264.
 — Forks 281.
 — Lakes 262. 266. 268.
 — River 234.
 Vernon 280.
 —, Lake 200.
 Verstovaia, Mt. 305.
 Victoria (B. C.) 289. xlv.
 — (N. B.) 38.
 —, Mt. 270. 269.
 — Beach 77. 76.
 — Glacier 263.
 — Lake 280.
 — Park 250.
 — Peak 292.
 Ville Marie 120.
 Villeroi 140.
 Vinemount 212.
 Virden 252.
 Virginia Water 112.
 Voynsesenie 263.
 Waasis 38.
 Wabigoon 242.
 — River 242.
 Wabouchbagama, the 171.
 Wachusett, Mt. 17.
 Wakami 234.
 Wakefield 182.
 Walcheren Island 8.
 Walkerville 207.
 — Junction 207.
 Wallace 85.
 Walldon 262.

- Walsh 255.
Waltham (Mass.) 17.
— (Ont.) 182.
Walton 83.
Wanapitei 233.
Wapella 252.
Wapta, Mt. 272. 271.
— Lake 270.
Waputik Mts. 268.
Wardner 267.
Warman 263.
Warroad 244.
Washademoak, the 34.
— Lake 35.
Washago 199.
Washington, Mt. 20.
Waterbury 15.
Waterdown 209.
Waterford 213.
Waterloo 205.
Waterville 21.
Watt Junction 25.
Waverley Mines 59.
Wayagamak, Lake 163
Wayland 234
Weed Lake 252.
Weedon 21.
Weirs 18
Welchpool 41.
Weldford 88.
Welland 213. 212.
— Canal 211.
Wellesley Island 228.
Wellington (B.C.) 292.
— (P. E. I.) 101
Wells River 18 15. 20
Wendover 184.
Wentworth 85.
Weser, the 8.
West, Cape 171.
— Albany 16.
Westbourne 251.
West Bay Road 63.
— Brook 122.
— Chazy 13
Westche ter 85.
West End 32. 23. 28.
Westfield 84
West Fort William 242.
— Gore 83.
Westminster Junc. 234.
— Park 228.
Weston 205. 222.
Westport (N. Y.) 13.
— (Ont.) 183. 188.
West River (Pictou) 60. 61.
— — (P. E. I.) 100.
— Robson 288
— St. Modiste 119.
— Selkirk 250.
Westville 59. 60.
Westakiwin 257. 251.
Wexford 5.
Weyburn 254.
Weymouth 182.
Whale Cove 45
Whiskey Creek 261.
Whitbourne Junction 120
Whitby 190. 183.
White Creek 14
Whitefish Bay 225.
— Lake 183
Whitehall 13.
White Hill Plains 122.
— Horse 302.
— — Rapids 302.
— Man Pass Trail 258.
— Mt. Notch 20.
— Mts. 19. 18. 25. etc.
Whitemouth 243.
White Pass 302.
— Plains 262.
— River 284.
— —, the 303.
— — Junction 15. 17. 20.
— Waters 74.
Whitney 204
Whittle, Cape 3.
Whonnock 284
Whycocomagh 66.
— Bay 66
Whyte, Mt. 269.
Whyewold 250.
Warton 205
Wickham 35
Widdisfield 237.
Wigan 302.
Wight, Isle of 7.
Wigwam 287.
Williams Creek 282.
Williamson's Lake 280.
Wilmot 75
— Spa Springs 75
Wilno 204
Winchester 186.
Wind Mt. 257.
Windermere (B.C.) 273
— (Lake Rosseau) 202.
Windsor (N. S.) 71. 82.
— (Ont.) 207. 212 213.
— (Vt.) 15
— Junction 84 71
— Lake 112.
Windy Lake 234.
Wingham 222.
Winnifred 266.
Winnipeg 245. 243. 244.
—, Lake 250. 243.
— Beach 250
— Junction 249.
Winnipegosis 263.
—, Lake 263.
Winnepesaukee, Lake 18.
19.
Winona 211.
Wiwaxy Peaks 271.
Wolf 235.
Wolfeborough 19.
Wolfe Island 203. 228.
— Lake 183.
Wolfe's Cove 144. 154.
Wolford 182.
Wolfville 73.
Wolseley 252.
Wolves, the 44.
Woman River 234.
Woodington 202.
Woodland 237.
Woodlands 250.
Woodman's 34
Woodpecker 266.
Woods, Lake of the 243.
242. 244.
Woodstock (N.B.) 40. 25 30.
— (Ont.) 207. 213.
— Road 39.
Woodward's Cove 45.
Wrangell 299.
— Narrows 299.
Wright, Mt. 304.
Wright's Sound 296.
Yabk 267.
Yale 283.
Yamachiche 139.
Yamaska 143.
—, the 19. 141
— Mt. 19. 136
Yarmouth (Me.) 25.
— (N. S.) 80. 23. 82.
Yellow Grass 254
Yoho 202.
— Glacier 272.
— Pass 271
— River 271.
— Valley 271 272.
Yonkers 13
York (Ont.) 190.
— (P. E. I.) 101
—, the (Gaspé) 91.
—, — (P. E. I.) 98. 100.
— Redoubt 56
Yorkton 251.
Young's Point 187
Youngstown 208.
Yukon (District) 253. 297.
293. xxvi.
—, the 292 303. xxxix xl.
etc.
Zarembo Island 299.
Zealand (N. B.) 39.
— (N. H.) 20.
Zealand 8.

Leipzig: Printed by Breitkopf & Härtel.

UNIVERSAL
LIBRARY



138 232

UNIVERSAL
LIBRARY

ammoniacal gas. I believe the errors in any of these particulars to be very small, and probably they may be such as partly to correct each other.

I find, after Mr. Davy, that a measure of water being put to a measure of ammoniacal solution, the two occupy two measures, without any sensible condensation; consequently, if the quantity of ammonia in a measure of any given specific gravity, as .90, be determined; then the quantity in a measure of .95, will be just half as much: Hence, a table is easily constructed for measures, and one for weights is derivable without much calculation.

Table of the quantities of real or gaseous ammonia in solutions of different specific gravities.

Specific gravity.	Grains of ammonia in 100 water grain measures of liquid.	Grains of ammonia in 100 grains of liquid.	Boiling point of the liquid old scale.	Volume of gas condensed in a given volume of liquid.
.85	30	35.3	26°	494
.86	28	32.6	33°	456
.87	26	29.9	50°	419
.88	24	27.3	62°	382
.89	22	24.7	74°	346
.90	20	22.2	86°	311
.91	18	19.8	98°	277
.92	16	17.4	110°	244
.93	14	15.1	122°	211
.94	12	12.8	134°	180
.95	10	10.5	146°	147
.96	8	8.3	158°	116
.97	6	6.2	173°	87
.98	4	4.1	187°	57
.99	2	2	196°	28

On the above table, it may be proper to remark, that I have not had large quantities of ammoniacal solution lower than .94, so as to find their specific gravities experimentally ; but have had small quantities to the amount of 10 or 20 grains of the several solutions from 26 to 12 per cent. ; I have no reason to suspect any material deviation from the law of descent observed in the specific gravity down to 12 per cent., when we go below that number ; at all events, it cannot be great down to .85, and it is not of much importance, because solutions of that strength are never obtained in the large way.—The second column, exhibiting the grains of ammonia in 100 measures of the solution, is more convenient for practice than the third, which gives the weight in 100 grains of solution. The fourth column, which shews the temperature at which the several solutions boil, will be found highly interesting. The ebullition of a liquid is well known to take place, when the steam or vapour from it is of the same force as the atmospheric pressure. In solutions down to 12 per cent., the experiments were performed by inserting a thermometer into a phial containing the solution, and plunging the phial into hot water till the liquid boiled ; but in the higher solutions a small portion, as 20

grains, was thrown up a tube filled with mercury; the tube was then put into a phial of mercury, and the whole plunged into warm water; the temperature was then ascertained requisite to bring the mercury in the tube to the level of that in the phial. The fifth column is calculated from the second, supposing the specific gravity of ammoniacal gas = .6.

It may be observed, that the above table gives the quantity of ammonia in different solutions, from 15 to 20 per cent. less than Mr. Davy's table; also, that the common ammoniacal solutions of the shops usually contain from 6 to 12 per cent. of ammonia.

Before we can estimate the value of the fourth and fifth columns of the table, we must ascertain the force of vapour from ammoniacal solutions at different temperatures. If it be found in some one instance, we may by analogy infer the results in others. As the steam from water varies in force in geometrical progression to equal increments of temperature, it might be expected that the steam or gas from liquid ammonia should do the same; but as the liquid is a compound, the simple law of the force of aqueous steam does not obtain. It appears, however, from the following results, that a near approximation to this law is

observed. Into a syphon barometer I threw a quantity of .946 liquid ammonia, which was by agitation, &c. transferred to the vacuum over the mercury. The vacuum was then immersed successively in water of different temperatures, and the force of the gas observed as under.

Temperature.

old scale.	new scale.	differences.	Force of ammoniacal steam from liquid .946.
140°	151°		30 inch.
		36°	
103°	115°		15
		31°	
74°	84°		7.5
		29°	
50°	55°		3.75

Hence it seems, that the intervals of temperature required to double the force of ammoniacal steam, increase in ascending. I had no doubt but this sort of steam or gas, would mix with common air, without having its elasticity affected, like as other steams do ; but I ascertained the fact by experiment : Thus I mixed a given volume of air with steam of 15 inches force, and found that the air was doubled in bulk.

These facts are curious and important. They shew that ammonia is not retained in water

without external force, and that the pressure of no elastic fluid avails but that of ammoniacal gas itself ; thus establishing the truth of the general law which I have so much insisted on, that *no elastic fluid is a sufficient barrier against the passage of another elastic fluid.*

We may now see upon what causes the saturation of water with ammonia depends. They are two ; the *temperature* of the liquid ; and the *pressure* of the incumbent ammoniacal gas, exclusive of the air intermixed with it. For instance, if the temperature be given, 50° (old scale) ; then the strongest possible solution, under atmospheric pressure, will be such, that 100 measures will have the specific gravity .87, and contain 26 grains of ammonia, or 419 times the volume of gas. But if, in saturating the water by sending up gas, there be common air, so as to make $\frac{7}{8}$ ths of the incumbent gas, then the solution cannot be made stronger than .946, of which 100 measures contain 11 grains of ammonia, or 162 times the volume of gas. I have obtained a saturated solution containing 26 per cent. ammonia, with $\frac{1}{4}$ th common air in the incumbent gas ; and at the same temperature, another saturated solution, containing only 17 per cent. ammonia, with $\frac{3}{4}$ ths common air in the incumbent gas.

With respect to the constitution of ammonia, Priestley, Scheele, and Bergman pointed out the two elements into which it is decomposed. Berthollet first settled the proportions of the elements, and the quantity of each obtained from a given volume of ammoniacal gas. It is highly to his credit too, that subsequent repetitions of his experiments, under the improved state of knowledge, have scarcely amended his results. Priestley resolved 1 measure of ammoniacal gas, by electricity, into 3 measures of gas not absorbable by water ; but his ammonia could not have been dry. Berthollet resolved 17 measures into 33 in the same way : this result has since been corroborated by various authors. He also found that the gas so produced, was a mixture of 121 parts of azote by weight, with 29 of hydrogen ; or 4.⁹ azote with 1 of hydrogen.

In 1800, Mr. Davy published his researches, in which were given several interesting results on ammonia, Mr. Davy decomposed ammonia, by sending the gas through a red hot porcelain tube ; after the common air was expelled, the collected gas was found free from oxygen. To 140 measures of this gas were added 120 of oxygen ; the mixture being exploded by electricity, 110 measures of gas were left ; and of course 150 were converted into

water ; of this 100 measures must have been hydrogen. Whence, 140 measures of the gas from decomposed ammonia, contained 100 hydrogen and 40 azote ; or 100 measures contained 71.4 hydrogen and 28.6 azote. This conclusion was so nearly agreeing with the previous determination of Berthollet, that both have justly been held up as specimens of the accuracy of modern chemical analysis.

In 1808, Mr. Davy published his celebrated discoveries relating to the decomposition of the fixed alkalies. Having ascertained that these contained oxygen, he was led by analogy to suspect the same element in ammonia. Several experiments were made, which seemed to countenance this idea ; but these could not be considered conclusive, as long as it was admitted that no oxygen appeared in the decomposition of ammonia by electricity, and yet that the weight of the azote and hydrogen were together equal to that of the ammonia decomposed. Mr. Davy re-examined the specific gravity of ammoniacal gas, the quantity of gases evolved by the decomposition of a given volume of it, and the ratio of azote to hydrogen in the same. The result was, that the gases obtained amounted only to $\frac{1}{17}$ ths of the weight of the ammonia ; the remaining $\frac{16}{17}$ th Mr. Davy thought must be oxygen,

which, uniting to hydrogen, formed a portion of water. The way in which this $\frac{1}{11}$ th was saved, was principally by diminishing the absolute quantity of gases derived from a given volume of ammonia, but partly by finding less azote and more hydrogen than had been before estimated. Thus, 100 measures of ammoniacal gas produced only 180 measures of mixed gas, though commonly estimated at 200; and this gas was found to consist of 26 azote and 74 hydrogen per cent.

These conclusions, so different from what had been long adopted, and depending upon experiments of some delicacy, were not likely to be received without a more general scrutiny. Dr. Henry in England, and A. B. Berthollet in France, seem both to have renewed the investigation into the component parts of ammonia with great care and assiduity. Dr. Henry's object was to determine whether any oxygen, water, or any other compound containing oxygen, could be detected in the analysis of ammonia; this enquiry included the two others; namely, the quantity of gases obtained from a given volume of ammoniacal gas, and the proportion of azote to hydrogen in the same. The results were, that neither oxygen nor water could be found; that for the most part the bulk of ammonia was doubled

by decomposition, even when the gas was previously dried with extreme care ; and that the ratio of azote to hydrogen in the mixture, from an average of six careful experiments, was $27\frac{1}{4}$ to $72\frac{3}{4}$. In this last decision, Dr. Henry was so fortunate as to discover a more easy and expeditious mode of analysis than had been known before ; he found that ammoniacal gas mixed with a due proportion of oxygen, of nitrous oxide, or even of nitrous gas, would explode by an electric spark. He found an under proportion of oxygen gas to answer best (about 6 measures of oxygen to 10 of ammonia) : the explosion produced a complete decomposition of the ammonia, and a partial combustion of the hydrogen ; after which more oxygen was put to the residuum, and the remainder of the hydrogen consumed. From one experiment, in which 100 measures of ammonia were decomposed in a tube of which the mercury had been previously boiled, Dr. Henry only obtained 181 measures of gas ; and he seems to think that this experiment may be the most correct in regard to that object. (*Philos. Trans.* 1809).

In the *Memoires d'Arcueil*, tom. 2, M. A. B. Berthollet has a paper on the analysis of ammonia. He alludes to the experiments of Berthollet in the memoirs of the academy.

1785 ; in which the ratio of 27.5 azote to 72.5 hydrogen, was found in the decomposed ammonia, allowing 196 hydrogen for 100 oxygen. He reports several experiments and observations relative to the oxidation and deoxidation of iron in ammoniacal gas. He then proceeds to prove, that the weight of azote and hydrogen produced in the decomposition of ammonia, is equal to the weight of the ammonia itself. Biot and Arago determine the specific gravities of azote, hydrogen, and ammonia, to be .969, .078, and .597 respectively, which A. B. Berthollet adopts. He finds that 100 measures of ammonia produce 205 of permanent gas ; which, by analysis, gives 24.5 azote and 75.5 hydrogen per cent. Like Dr. Henry, A. B. Berthollet decomposed ammonia by exploding it with oxygen gas ; but unfortunately he used an *excess* of oxygen, and then determined the residuary oxygen by the addition of hydrogen : he was aware, however, that part of the azote was thus converted into nitric acid. Upon collecting the results, he makes it appear, that the gases produced by the decomposition of ammonia are, as nearly as possible, equal to the weight of the ammonia.

Though the experiments of these two authors may be deemed satisfactory, with regard to the non-existence of oxygen in ammonia,

they would have been more so if they had accorded in the quantity of gas derived from a given volume of ammonia, and in the ratio of azote to hydrogen. Having made some experiments myself on these heads, I may be allowed to give my opinion as to the causes of these differences.—I am persuaded, with Mr. Davy, that ammonia is not doubled by decomposition, when due care is taken to prevent any liquid from adhering to the tube or mercury; but at the same time am inclined to believe, from experience, that 100 measures of ammonia will give not less than 185 or 190 measures of gas by decomposition: I took a tube and filled it with dried mercury; then transferred a portion of gas into it, and by pushing a glass rod up the tube several times, displaced the mercury in the tube, so that no liquid ammonia could exist in the renovated mercury. This gas, being decomposed by electricity, produced after the rate of 187 for 100. With respect to the ratio of azote to hydrogen, I am convinced it is to be obtained only by decomposing the ammonia previously to the combustion of the hydrogen, and this may be done either by electricity or by heat; in these cases, ammonia will be resolved into 28 measures of azotic gas, and 72 measures of hydrogen gas, in the hundred. I have re-

peatedly obtained it so by electricity, the results never deviating farther than from 27 to 29 of azote. This agrees sufficiently with Berthollet's original analysis by electricity, and with Davy's analysis by heat in 1800; both of them made without any theoretic views as to quantity, which cannot be said of any of the subsequent investigations on this subject.

We are now to see how far these results will agree with the specific gravity of ammoniacal gas: that is, whether the weights of the two gases are equal to the weight of the ammonia decomposed.

				Grains.
	100 measures of ammonia,	which \times sp. gr. .6	gives 60	
become	185 measures of mixed gas,			
namely,	51.8 azote, — — —	which \times sp. gr. .967	gives 50.09	
and	133.2 hydrogen, — —	which \times sp. gr. .08	gives 10.65	
				<hr/> 60.74

The excess of $\frac{3}{4}$ ths of a grain upon 60, is too small to merit notice, and may arise from an inaccuracy in any of the data, which, if corrected, could have no material influence on the conclusions.

I shall now make a few observations on the other methods of analyzing ammonia. Dr. Henry's methods of burning ammonia in Volta's eudiometer along with oxygenous gas,

nitrous gas, and nitrous oxide, unite elegantly with expedition, and when well understood, cannot but be valuable. It appears to me, however, both from experience and analogy, that a compound combustible, such as ammonia, is never decomposed and one of its elements burnt, to the entire exclusion of the other. Numerous instances may be found in the compounds of charcoal and hydrogen, of phosphorus and hydrogen, &c. where one of the elements seizes the oxygen with more rapidity than the other ; but some portion of the other is always burnt. Even when the combustible gases are only mixed together, and not combined, we do not find that one of them precludes the other from taking a share of the oxygen till it is saturated. Thus, in a mixture of carbonic oxide with hydrogen, with a deficiency of oxygen, part of both is burnt by an electric spark. Dr. Henry has, indeed, noticed that ammonia fired with excess of oxygen, gives nitric acid as well as water. I have reason to believe this is the case in some degree, in whatever proportion they are fired. I have seldom obtained so much as 27 per cent. of azote by the combustion of ammonia with oxygen (the hydrogen being estimated by doubling the oxygen spent), and in no instance 28 : but it will be manifest that all the

oxygen is not consumed in burning the hydrogen, if we note the ammoniacal gas expended, and allow only 66 or 67 per cent. oxygen for the hydrogen ; there will generally be found a greater expence of oxygen, which must have gone to form nitric acid. The combustion of ammonia with nitrous gas usually gives from 25 to 27 per cent. of azote, allowing the constitution of nitrous gas to be what is stated at page 331. Upon the whole, I found nitrous oxide to approximate nearest to the truth. When 100 measures of ammonia are exploded with 120 of nitrous oxide, the gases resulting are azote with a very small portion of hydrogen ; if to this a little hydrogen be added, and then an excess of oxygen, another explosion will determine the residuary hydrogen ; which being deducted, there remain about 172 azote, 120 of which come from the nitrous oxide, and 52 from the ammonia, which gives after the rate of 28 azote per cent. on the evolved gases.—When the decomposition of ammonia is attempted by oxymuriatic acid gas, a graduated tube is filled with the gas, and plunged into liquid ammonia in this way, if we reckon a measure of the acid gas to a measure of hydrogen, we shall find the azote evolved and left in the tube, amount to 23 or 24 per cent. upon both gases. It is to be presumed,

then, tha. oxymuriatic acid, like oxygen, consumes part of both the elements of ammonia.

By comparing the weight of azote with that of hydrogen in the above table, we find them as 4.7 to 1 nearly. This evidently marks the constitution of ammonia to be that of 1 atom of each of the elements combined. But we have before determined the element of azote to weigh 5.1, when treating of the compounds of azote and oxygen. This difference is probably to be ascribed to our having over-rated the specific gravity of nitrous gas, and perhaps nitrous oxide. In the *Memoires d'Arcueil*, I observe Bérard finds the specific gravity of nitrous gas to be 1.04, instead of 1.10, which last I have made my calculations from ; if the former should prove true, it will reduce my valuation of azote in nitric acid nearly to 4.7 ; I have not had an opportunity of ascertaining the specific gravity of nitrous gas ; but am inclined to believe that 1.10 may be too high. Berthollet finds nitrous oxide to be 1.36, instead of 1.61 ; I much suspect the former is too low.

Upon the whole, we may conclude that an atom of ammonia is constituted of 1 atom of hydrogen and 1 of azote, and weighs nearly 6. The diameter of the elastic particle is .909,

that of hydrogen being 1. Or, 300 measures of ammoniacal gas contain as many atoms as 400 measures of hydrogen, or as 200 of oxygen.

SECTION 7.

HYDROGEN WITH CARBONE.

There are two combinations of hydrogen with carbone, now well known, easily distinguishable from each other and from all other combinations. They are both elastic fluids; one of them, called olefiant gas, is a compound of 1 atom of hydrogen and 1 of carbone; the other, which I call carburetted hydrogen, is a compound of 2 atoms of hydrogen and 1 of carbone, as will be manifest from what follows.

1. *Olefiant Gas.*

The gas denominated *olefiant*, was discovered and examined by the Dutch chemists, Bondt, Dieman, &c. and a memoir on the subject was published in the 45th vol. of the *Journal de Physique*, 1794.

Olefiant gas may be procured by mixing 2 measures of sulphuric acid with 1 measure of alcohol ; this mixture in a gas bottle must be heated to about 300° by a lamp, when the liquid exhibits the appearance of ebullition, and the gas comes over : it should be passed through water, to absorb any sulphurous acid which may be generated.

This gas is unfit for respiration, and extinguishes flame, but it is highly combustible : its specific gravity, according to the Dutch chemists, is .905 ; according to Dr. Henry, .967. Perhaps .95 is about the truth. Water absorbs $\frac{1}{8}$ th of its bulk of this gas ; or the atoms of gas in the water are just twice the distance they are without ; and it may be expelled again by the other gases. This property (of being absorbed by 8 times its bulk of water) occurred to me in 1804, in a course of experiments on the absorption of gases by water. It is peculiar to this gas, and consequently distinguishes it from all others. When olefiant gas is mixed with oxymuriatic acid gas, a diminution takes place, like as when oxygen and nitrous gas are mixed ; but the result is an *oil*, which swims on the surface of the water. Hence the Dutch chemists gave this gas the name of *olefiant*. For this purpose, they found 3 measures of olefiant gas required

4 measures of the acid gas; but Dr. Henry finds 5 of olefiant require 6 of the acid. The difference is not great, considering the difficulty of the experiment. As neither of these results will agree with the other known properties of these two gases, I suspected that both would be found in some degree incorrect; which proved to be the case from the following experiments. Having taken two similar tubes graduated, containing each about 170 grains of water, I filled them, one immediately after the other, from a bottle generating oxymuriatic acid copiously; into one of these, 200 measures of olefiant gas were slowly transferred; after standing some time, the residuary gas was transferred and noted; then the other tube with acid gas was taken, the gas passed 5 or 6 times through water, till no further diminution was observed, and the residuary gas was noted and allowed for impurity in the first tube. By this procedure no acid gas was lost, and an excess of olefiant gas being used, the purity of this last did not enter into the calculation. In one trial, 165 measures of oxymuriatic acid gas condensed 168 of olefiant gas; in another, 165 took 167. From these, I conclude that oxymuriatic acid requires a very little more than its bulk of olefiant gas to be saturated: perhaps 100 of the former may take

102 measures of the latter ; but if we reckon equal volumes, the error cannot in general be material.

Olefiant gas burns with a dense, white flame. It explodes with uncommon violence when mixed with oxygen and electrified ; the products resulting are various, according to the circumstances. When completely saturated with oxygen, the results are, according to

Berthollet,	100	measures	take	280	oxygen,	produce	180	carb. acid.
Dr. Henry,	100	—	—	284	—	—	179	

The rest of the produce is water. These results, agreeing so well with each other, are the more plausible ; but I can add that my own experience corroborates them, particularly in regard to oxygen : My results have always given less than 300, but more than 270 ; the acid, I apprehend, should be about 185 or 190 : unless a great excess of oxygen be used, the charcoal is partly thrown down, and it makes the gas turbid after the explosion ; the result in this case affords less carbonic acid than is due.

When olefiant gas alone is subjected to continued electricity, either over mercury or water, the result is hydrogen gas, and a quantity of charcoal is deposited. A very careful experiment of this kind was made by Dr. Henry

and myself, in which 42 measures of pure olefiant gas were electrified till they became 82 ; these were exploded with oxygen, and found to consist of 78 hydrogen, and 2 olefiant gas. Here 40 olefiant became 78 hydrogen, or very near double. The charcoal was thrown down. According to this, 100 measures of olefiant gas will contain 195 of hydrogen ; which require 98 oxygen for their combustion ; now as the charcoal must take the rest, or nearly 196 measures, it follows that in the combustion of olefiant gas, 2 parts of the oxygen are spent upon the charcoal, and 1 part upon the hydrogen. Hence we obtain this conclusion, that an atom of olefiant gas consists of 1 of charcoal and 1 of hydrogen united. No oxygen can be present in olefiant gas ; because during the electrification it would be detected, either in the form of water or carbonic oxide.

It will be proper now to see how far the weights of the gases entering into combination, agree with the previous determinations. An atom of charcoal weighs 5.4 (see page 382), and 1 of hydrogen weighs 1, together making an atom of olefiant gas, 6.4. This atom will require 3 of oxygen for its combustion ; namely, 2 for the charcoal, to form carbonic acid, and 1 for the hydrogen, to form water ;

these 3 weigh 21 ; whence 6.4 parts of olefiant gas by weight, should take 21 of oxygen. Now supposing, according to Dr. Henry's result, that 100 measures of olefiant gas require 284 for their combustion ; and further, that the specific gravity of oxygenous gas is 1.10 (agreeably to Allen and Pepys, as also Biot and Arago), we shall have $284 \times 1.1 = 312.4$, the weight of the oxygen ; hence, if $21 : 6.4 :: 312.4 : 95$, the weight of 100 measures of olefiant gas, corresponding to a specific gravity of .95. Hence, then, it appears that the weight of the gases combined, perfectly corroborates the above conclusions respecting the constitution of olefiant gas.

There are some remarkable circumstances attending the combustion of olefiant gas in Volta's eudiometer, which deserve notice as part of the history of the gas, but particularly as they put the constitution of the gas beyond all doubt. If 100 measures of oxygen be put to 100 of olefiant gas, and electrified, an explosion ensues, not very violent ; but instead of a diminution, as usual, there is a great increase of gas ; instead of 200 measures, there will be found about 360 ; some traces of carbonic acid are commonly observed, which disappear on passing two or three times through lime water ; there will then remain, perhaps,

350 measures of permanent gas, which is all combustible, yielding by an additional dose of oxygen, carbonic acid and water, the same as if entirely burnt in the first instance. What, therefore, is this new gas in the intermediate state? The answer is clear. It is carbonic oxide and hydrogen mixed together, an equal number of atoms of each. One third of the oxygen requisite for the complete combustion, suffices to convert the carbone into carbonic oxide, and the hydrogen at the instant is liberated; hence the other two thirds are employed, the one to convert the carbonic oxide into acid, the other to convert the hydrogen into water. In fact, the 350 measures consist of nearly 170 of each gas, which together require nearly 170 of oxygen for their combustion.*

* M. Berthollet contends, that all the combustible gases into which carbone and hydrogen enter, contain also oxygen: he calls them *oxycarburetted hydrogen*. Mr. Murray also enters into his views in this respect.—As far as relates to olefiant gas, it will be time enough for animadversion on this opinion, when the accuracy of the above facts and observations are questioned. But there is one circumstance which M. Berthollet has not explained in regard to this gas, and it turns upon a point which he and I acknowledge, but which is not perhaps generally received; namely, that *when two gases unite to form a third, this last is specifically heavier than the lighter of the two*. Now, in the above

The diameter of an atom of olefiant gas is .81 to hydrogen 1. And 100 measures of it contain as many atoms as 188 of hydrogen, or as 94 of oxygen, or (probably) as 200 of oxy-muriatic acid ; whence the union of this last with olefiant gas, must be 2 atoms of the gas with 1 of the acid.

2. Carburetted Hydrogen.

The gas which I denominate carburetted hydrogen, was known in a state of mixture, to Dr. Priestley ; he called all such mixtures by the name of *heavy inflammable air*. Lavoisier, Higgins, Austin, Cruickshanks, Berthollet, Henry and others, have since cultivated this department of science.—Cruickshanks contributed much to unveil the subject, by pointing out carbonic oxide as an inflammable gas, *sui generis*, but often found mixed with other gases. No correct notion of the constitution of the gas about to be described, seems to have been formed till the atomic

instance, we find olefiant gas and oxygenous gas, uniting to form a third (according to his opinion), which is lighter by one half nearly than the lighter of the two. How is this new oxycarburetted hydrogen to be reconciled with the above principle ?

theory was introduced and applied in the investigation. It was in the summer of 1804, that I collected at various times, and in various places, the inflammable gas obtained from ponds; this gas I found always contained some traces of carbonic acid and a portion of azote; but that when cleared of these, it was of a uniform constitution. After due examination, I was convinced that just one half of the oxygen expended in its combustion, in Volta's eudiometer, was applied to the hydrogen, and the other half to the charcoal. This leading fact afforded a clue to its constitution.

Carburetted hydrogen gas may be obtained in a pure state, with the above exceptions, from certain ponds in warm weather. Clayey ponds, in the vicinity of a town, where soot and other carbonaceous matter is deposited, abound with this gas. The bottom of the pond being stirred with a stick, large bubbles ascend, which may be caught by filling a tumbler with water, and inverting it over the ascending bubbles. This gas is obtained nearly pure also by distilling pitcoal with a moderate red heat. It is now largely used as a substitute for lamps and candles, under the name of *coal gas*. According to Dr. Henry's analysis, coal gas does not usually contain more than 4 or 5 per cent. of carbonic acid, sulphuretted hydro-

gen, and olefiant gas. The rest is principally carburetted hydrogen, but mixed with some atoms of carbonic oxide and hydrogen. The last portion of gas driven off from pit-coal, seems to be entirely carbonic oxide and hydrogen. The distillation of wood and of moist charcoal, and many other vegetable substances, produces carburetted hydrogen, but highly charged with carbonic acid, carbonic oxide and hydrogen; the two last gases always appear exclusively at the end of the process.

The properties of carburetted hydrogen are,
1. It is unfit for respiration, and for the support of combustion. 2. Its specific gravity when pure, from my experience is very near .6. Dr. Henry finds the coal gas to vary from .6 to .78; but then the heaviest contain 15 per cent. of the heavy gases, carbonic acid, sulphuretted hydrogen, and olefiant gas.—Water absorbs $\frac{1}{27}$ th of its bulk of this gas.—If 100 measures of carburetted hydrogen be mixed with 100 measures of oxygen (the least that can be used with effect), and a spark passed through the mixture, there is an explosion, without any material change of volume: after passing a few times through lime water, it is reduced a little, manifesting signs of carbonic acid. This residue is found to possess all the characters of a mixture of equal

volumes of carbonic oxide and hydrogen. Upon adding 100 measures of oxygen to this residue and passing a spark, nearly 100 measures of carbonic acid are produced, and the rest of the produce is water. If 100 measures of carburetted hydrogen be put to upwards of 200 of oxygen, and fired over mercury, the result will be a diminution of near 200 measures, and the residuary 100 measures will be found to be carbonic acid.

Though carburetted hydrogen is naturally produced in many coal mines, and occasionally mixing with common air, exhibits some dreadful explosions in the large way; yet when mixed with common air, in Volta's eudiometer, it does not explode by a spark, unless the gas be to the air, as 1 to 10 nearly, and then feebly.

When a portion of carburetted hydrogen gas is electrified for some time, it increases in volume, in the end almost exactly doubling itself; at the same time a quantity of charcoal is deposited. The whole of the gas is then found to be pure hydrogen.

All these facts being compared, there cannot remain the least doubt as to the constitution of carburetted hydrogen. It is a compound of one atom of charcoal and two of hydrogen; the compound atom occupies the same space

(nearly) as an atom of hydrogen ; and 4 atoms of oxygen are necessary to its complete combustion ; namely, 2 for the charcoal to form carbonic acid, and 2 for the hydrogen to form water. This conclusion derives a very elegant confirmation, from the facts observed by exploding the gas with one half of the oxygen requisite for complete combustion. In this case, each atom of the gas requires only 2 atoms of oxygen ; the one joins to one of hydrogen and forms water ; the other joins to the carbone to form carbonic oxide, at the same moment the remaining atom of hydrogen springs off. Thus there becomes 100 measures of carbonic oxide and 100 of hydrogen, or the same bulk as the original mixture.

As the weight of an atom of charcoal is 5.4, and 2 atoms of hydrogen are 2, the compound atom weighs 7.4 ; but as there are the same number of atoms of hydrogen and of carburetted hydrogen in the same volume, 7.4 represents the number of times that carburetted hydrogen is heavier than hydrogen. Now, the weight of common air is about 12 times as great as hydrogen ; therefore, the relative weights or specific gravities of the two gases, are as 7.4 to 12, or as .6 to 1, nearly, which agrees with experience ; hence we derive this conclusion, that carburetted hydrogen consists

entirely of hydrogen and carbone, the whole weight of the gas being accounted for in the carbonic acid and water formed by its combustion.*

I think it proper to observe, that, according to my most careful experiments, 100 measures of this gas require rather more than 200 mea-

* According to M. Berthollet (Mem. d'Arcueil, tome 2d) the gas from charcoal is a triple compound of carbone, oxygen, and hydrogen. Whatever our speculative chemists may believe, no practical chemist in Britain adopts this idea. That it always contains more or less of oxygen no one disputes; but then the oxygen is united solely to the carbone forming carbonic oxide. The rest of the mixture consists of carburetted hydrogen and hydrogen. I never find any difficulty in ascertaining the relative quantities of each of the gases in such mixtures. For instance, suppose we take the first of Berthollet's nine specimens.

100 gas,	sp. gr. .462	took 81 oxy.	gave 56 carb. acid.
20 carb. hyd.	sp. gr. .6	takes 42	gives 21
34 carb. ox.	.94	16	32
46 hyd.	.08	23	
100 mixt	.476	takes 81	gives 53

Here it appears, that 20 measures of carb. hyd. + 34 carb. oxide + 46 hydrogen, constitute a mixture of 100 measures of the sp. grav. .476, which being burned, take 81 oxygen, and give 53 carb. acid. Hence this mixture may be considered as agreeing with Berthollet's gas from charcoal above specified.

tures of oxygen, and give rather more than 100 carbonic acid ; but the difference is not more than 5 per cent. and may in general be neglected.—Hence, then, we may conclude that the diameter of an atom of carburetted hydrogen is nearly equal to that of hydrogen, but rather less.

SECTION 8.

HYDROGEN WITH SULPHUR.

There are two compounds of hydrogen with sulphur ; the one, a well known elastic fluid denominated *sulphuretted hydrogen*, the other a viscid, oily compound, called *supersulphuretted hydrogen*. The former of these consists of 1 atom of each element,* the the latter probably of 1 atom of hydrogen united to 2 of sulphur.

1. *Sulphuretted Hydrogen.*

The best way I have found to obtain sulphuretted hydrogen in a pure state, is to heat a piece of iron to a white or welding heat in a

* The figure for sulphuretted hydrogen, plate 4, part 1, is incorrect : it ought to be 1 atom of hydrogen instead of 8, united to 1 of sulphur.

smith's forge, then suddenly drawing it from the fire, apply a roll of sulphur; the two being rubbed together, unite and run down in a liquid form, which soon fixes and becomes brittle. This compound or sulphuret of iron, is to be granulated and put into a gas bottle, to which dilute sulphuric acid is to be added, after which the gas comes over plentifully. When the sulphuret of iron is made in a crucible from iron filings and sulphur, it seldom answers well; it often gives hydrogen mixed with the sulphuretted hydrogen. The reason seems to be, that several sulphurets of iron exist; namely, the first, the second, the third, &c. and it is the second only, or that which is constituted of 1 atom of iron and 2 of sulphur, formed in the process above described, which is essential to the formation of sulphuretted hydrogen. The others either give hydrogen or no gas at all.

Sulphuretted hydrogen is unfit for respiration and for supporting combustion: it has a disagreeable smell, resembling that of rotten eggs; its specific gravity is 1.10 according to Kirwan, and 1.23 according to Thenard. Mr. Davy, I understand, makes it about 1.13. Some trials of mine a few years since, gave a result near Thenard's; but till a more correct one can be obtained, we may adopt the mean 1.16. Wa-

ter absorbs just its bulk of this gas; when, therefore, it is mixed with hydrogen, this last will be left after washing in water, or what is still better, in lime water. Sulphuretted hydrogen burns with a blue flame. When mixed with oxygen, in the ratio of 100 measures to 50 of oxygen (which is the least effective quantity), it explodes by an electric spark; water is produced, sulphur is deposited, and the gases disappear. If 150 or more measures of oxygen are used, then after the explosion over mercury, about 87 measures of sulphurous acid are found in the tube, and 150 of oxygen disappear, or enter into combination with both the elements of the gas.

From the experiments of Austin, Henry, &c. it has been established, that sulphuretted hydrogen undergoes no change of volume by electrification, but deposits sulphur. I have repeated these experiments, and have not been able to ascertain whether there was increase or diminution. The residue of gas is pure hydrogen.

From these facts, the constitution of sulphuretted hydrogen is clearly pointed out. It is 1 atom of sulphur and 1 of hydrogen, united in the same volume as 1 of pure hydrogen. When burned, 2 atoms of oxygen unite to 1 of sulphur to form sulphurous acid, and 1 of

oxygen to 1 of hydrogen to form water. The weights of the elements confirm this constitution. One atom of sulphur has been found to weigh 13 (see page 393), to which adding 1 for hydrogen, we obtain the weight of an atom of sulphuretted hydrogen = 14; this number likewise expresses the number of times that sulphuretted hydrogen should exceed hydrogen in specific gravity. But common air exceeds hydrogen 12 times; therefore, $12 : 14 :: \text{specific gravity of common air} : \text{sp. gravity of sulphuretted hydrogen} = 1.16$, agreeably to the preceding determination. Hence this gas is wholly composed of sulphur and hydrogen, as above.

Sulphuretted hydrogen unites, like the acids, to alkalies, earths, and metallic oxides, forming with them salts of definite proportions, which are called *hydrosulphurets*. Some of these are important chemical agents; but they are apt to undergo changes by keeping, especially in solution.

2. *Supersulphuretted Hydrogen.*

This compound may be obtained as follows: Let half an ounce of flower of sulphur and as much hydrate of lime, be gently boiled together in a quart of rain water for one hour;

more water may be added as it evaporates. After cooling, a clear yellow liquid is obtained, which is a solution of sulphuret of lime: it will vary in specific gravity from 1.01 to 1.02, according to circumstances.—To 6 ounces of this liquid put half an ounce of muriatic acid, and stir the mixture. In a short time, the mixture exhibits a milky appearance, and this becomes interspersed with brown oily dots, which gradually subside into an adhesive mass of a semiliquid form at the bottom. The liquid may then be poured off, and the brown mass washed with water, which is to be poured off. From 20 to 40 grains of this brown oily substance will be obtained; it is super-sulphuretted hydrogen.

Scheele, Berthollet, and Proust, have made observations on this compound. When exposed to the air, or even in water, it exhales sulphuretted hydrogen, especially if warm. On account of its viscosity and adhesiveness, it is very difficult to subject it to experience. If a portion of it touch the skin, &c. it requires a knife to scrape it off. It may be poured from one vessel to another by means of water, which prevents its adhering to the vessel. When a little of it is applied to the tongue, a sensation of great heat, and a bitter taste are felt; the saliva becomes white like milk.

When liquid alkali is poured upon supersulphuretted hydrogen, heat is produced, hydro-sulphuret is formed, and sulphur precipitated. —These facts have all been observed by me; though few if any of them are new.

There is no doubt this substance is formed of sulphur and hydrogen. I took 30 grains, and exposed them to a moderate heat in a glass capsule, over a candle, till they ceased to exhale sulphuretted hydrogen. The residuum weighed 21 grains; it was soft like clay; when ignited, it burned away with a blue flame, and left no sensible residuum. When it is considered, that supersulphuretted hydrogen is from the moment of its formation exhaling sulphuretted hydrogen, we cannot wonder that a portion of it should give less than half its weight of this gas. But scarcely any doubt can be raised that the sulphur of the gas is originally equal to that left behind; or that supersulphuretted hydrogen is constituted of 2 atoms of sulphur and 1 of hydrogen, and consequently weighs 27 times as much as hydrogen.

Though it is not our present business to explain the previous process by which the article under discussion is obtained; yet, as it will be some time before it comes regularly in our way, it may perhaps be allowable. Hydrate

of lime, is 1 atom of lime and 1 of water united ; when boiled with sulphur as above, it takes 3 atoms of sulphur. The compound is *sulphuret of hydrate of lime*. When muriatic acid is mixed with it, the acid seizes the lime. The 3 atoms of sulphur divide the atom of water in such sort, that two of them take the hydrogen to form *supersulphuretted hydrogen*, and one takes the oxygen to form *sulphurous oxide*. This last occasions the milkiness of the liquid ; by long digestion the milkiness vanishes ; the sulphurous oxide is changed into sulphuric acid and sulphur, which last falls down, and forms nearly one fourth of that which originally existed in the sulphuret.

SECTION 9.

HYDROGEN WITH PHOSPHORUS.

There is only one combination of hydrogen with phosphorus yet known ; it is a gas denominated *phosphuretted hydrogen*. This gas may be procured as follows : Let an ounce or two of hydrate of lime (dry slacked lime) be put into a gas bottle or retort, and then a few small pieces of phosphorus, amounting to 40 or 50 grains. If the materials are sufficient to

fill the bottle, no precaution need be used ; but if not, the bottle or retort should be previously filled with azotic gas, or some gas not containing oxygen, in order to prevent an explosion. The heat of a lamp is then to be applied, and a gas comes which may be received over water. This gas is phosphuretted hydrogen ; but sometimes mixed with hydrogen. —Liquid caustic potash may be used instead of hydrate of lime, in order to prevent the generation of hydrogen.

Phosphuretted hydrogen gas has the following properties : 1. When bubbles of it come into the atmosphere, they instantly take fire ; an explosion is produced, and a ring of white smoke ascends, which is phosphoric acid : 2. It is unfit for respiration, and for supporting combustion : 3. Its specific gravity is .85, common air being denoted by unity : 4. Water absorbs $\frac{1}{27}$ th of its bulk of this gas : 5. If the gas be electrified, the phosphorus is thrown down, and there finally remains the bulk of the gas of pure hydrogen. In fact, the phosphorus is easily thrown down, either by electricity, by heat, or by being exposed to a large surface of water. In this respect, phosphuretted hydrogen is nearly related to sulphuretted hydrogen.

Though phosphuretted hydrogen explodes

when sent into the atmosphere in bubbles, yet if sent into a tube of three tenths of an inch diameter, it may be mixed with pure oxygen, without any explosion. In all the experiments I have made, which are more than 20, I never had an instance of a spontaneous explosion. In this case, an electric spark produces a most vivid light, with an explosion not very violent; phosphoric or phosphorous acid and water are produced.

My experiments on the combustion of this gas give the following results: When 100 measures of pure phosphuretted hydrogen are mixed with 150 of oxygen, and exploded, the whole of both gases disappears; water and phosphoric acid are formed; when 100 measures of the gas are mixed with 100 oxygen, and fired, the whole of both gases still disappears; in this case, water and phosphorous acid are formed; when 100 measures are mixed with less than 100 of oxygen, phosphorous acid and water are formed, but part of the combustible gas remains unburnt.

As this gas is liable to be contaminated with hydrogen, sometimes largely, on account of the facility it possesses of depositing phosphorus, it is expedient to ascertain the exact proportion of phosphuretted hydrogen to hydrogen in any proposed mixture. This I find

may easily be done. Whenever a sufficient quantity of oxygen is afforded, the whole of the combustible gas is consumed : The exact volume of oxygen and its purity must be noted ; the quantity of oxygen in the residue must also be noted. Then the total diminution after the explosion, being diminished by the oxygen consumed, leaves the combustible gas. Now, as phosphuretted hydrogen takes $1\frac{1}{2}$ times its bulk of oxygen, and hydrogen takes $\frac{1}{2}$ its bulk of oxygen ; we shall obtain the following equations, if P denote the volume of phosphuretted hydrogen, H that of hydrogen, O that of oxygen, and $S = P + H$, the whole of the combustible gas.

$$\begin{aligned} P &= O - \frac{1}{2}S \\ H &= 1\frac{1}{2}S - O \end{aligned}$$

From these equations, the ratio of the two gases in any mixture is deduced. The analysis may be corroborated as follows : To any mixture containing a certain volume of phosphuretted hydrogen, let the same volume of oxygen be added ; after the explosion, the diminution will be just twice the volume of oxygen. In this case, the phosphuretted hydrogen is preferred by the oxygen ; phosphorous acid, and water are formed, and the hydrogen remains in the tube. If more oxy-

gen is put than the phosphuretted hydrogen; then the diminution after firing is more than twice the oxygen.

The investigation respecting the proportion of hydrogen mixed with phosphuretted hydrogen, was instituted chiefly in consequence of a difference of opinion respecting the specific gravity of the latter gas. I had found 100 cubic inches to weigh about 26 grains; Mr. Davy informed me he had found 100 inches to weigh only 10 grains: the difference is enormous. I requested Dr. Henry would assist me in repeating the experiment. We obtained a gas, such that 100 inches weighed 14 grains; this result surprized me; but upon burning the gas with oxygen, it was found only to take its bulk of that gas, and consequently to be half hydrogen and half phosphuretted hydrogen, which satisfactorily explained the difficulty. Mr. Davy's gas, I conceive, must have been $\frac{2}{3}$ phosphuretted hydrogen and $\frac{1}{3}$ hydrogen, at the time it was weighed; however this may be, it is evident, from what is related above, that nothing certain can be inferred relative to the specific gravity of this gas, unless a portion of the gas be analyzed previously to its being weighed; a circumstance of which I was not at first sufficiently aware.

I have recently procured some phosphuretted hydrogen gas from caustic potash and phosphorus; an accident prevented me obtaining a sufficient quantity to weigh; but I got 5 or 6 cubic inches, which of course were mixed with the azotic gas previously put into the retort. The pure combustible gas was of such character, that 100 measures required only 85 of oxygen for their combustion; it was consequently 35 phosphuretted hydrogen and 65 hydrogen per cent. and probably would have weighed after the rate of 10 or 11 grains for 100 cubic inches. I expected much purer gas.

As to the constitution of phosphuretted hydrogen, it is clearly 1 atom of phosphorus united to 1 of hydrogen, occupying the same space as 1 of elastic hydrogen. In combustion, the atom of hydrogen requires one of oxygen, and the atom of phosphorus requires one or two of oxygen, according as we intend to produce phosphorous or phosphoric acid. Hence it is that 100 measures of phosphuretted hydrogen require 50 oxygen to burn the hydrogen, 50 more of oxygen to form phosphorous acid, and 50 more to form phosphoric acid. The weight of the gas corroborates this conclusion: it has been seen that the atom of phosphorus weighs nearly 9 (page 415); this

would make the specific gravity of phosphuretted hydrogen equal to 10 times that of hydrogen, which it actually is, or nearly so, from the foregoing experiments.

The next compounds to be considered in course, would be those of *azote* with *carbone*, with *sulphur*, and with *phosphorus* ; but such compounds either cannot be formed, or they are yet unknown.

SECTION 10.

CARBONE WITH SULPHUR, WITH PHOSPHORUS, AND SULPHUR WITH PHOSPHORUS.

1. *Carbone with Sulphur.*

In the 42d vol. of the *An. de Chimie*, page 136, Clement and Desormes have announced a combination of carbone and sulphur, which they call *carburetted sulphur*. They obtain it by sending the vapour of sulphur over red hot charcoal ; it is collected in water in the form of an oily liquid of the specific gravity 1.3. This liquid is volatile, like ether, expanding any gas into which it is admitted, and forming

a permanent elastic fluid over the mercury of a barometer. No gas is produced at the same time as the liquid. When too much sulphur is driven through, instead of a liquid, a solid compound is formed which crystallizes in the tube. They seem to have shewn that the compound does not contain sulphuretted hydrogen.—In the 64th vol. of the *Journal de Physique*, A. B. Berthollet endeavours to prove that the liquid in question is a compound of hydrogen and sulphur, and contains no charcoal. The facts adduced are not sufficient to decide the question either way. I should be unwilling to admit, with Clement and Desormes, that the two inelastic elements, charcoal and sulphur, would form an elastic or volatile compound ; yet, they have rendered it highly probable that charcoal makes a part of the compound, as it disappears during the process. I think it most probable, that Berthollet is correct in the idea that this liquid contains hydrogen. We know of no other volatile liquid that does not contain hydrogen. Perhaps it will be found a triple compound of hydrogen, sulphur, and charcoal.

2. *Carbone with Phosphorus.*

A combination of carbone and phosphorus has been pointed out by Proust, in the 49th volume of the *Journal de Physique*, which he names *phosphuret of carbone*. It is the reddish substance which remains when new made phosphorus is strained through leather in warm water. The proportion of the two elements has not been ascertained.

3. *Sulphur with Phosphorus.*

Melted phosphorus dissolves and combines with sulphur, and that in various proportions, which have not yet been accurately ascertained. The compounds may be denominated *sulphurets of phosphorus*. The method of forming these compounds, is to melt a given weight of phosphorus in a tube nearly filled with water, and then to add small pieces of sulphur, keeping the tube in hot water, taking care not to exceed 160° , or 170° , or 180° , because the new compound begins to decompose water rapidly at those high temperatures. Pelletier has given us some facts towards a theory of these various combinations, in the

4th vol. of the *An. de Chimie*. He found that a mixture of sulphur and phosphorus remained fluid at a much lower temperature than either of them individually; and that different proportions gave different fusing or congealing points. One part of phosphorus, combined with $\frac{1}{3}$ th of sulphur, congealed at 77° ; one part with $\frac{1}{4}$, at 59° ; one part with $\frac{1}{2}$, at 50° ; one part with 1, at 41° ; one part with 2, at $54^{\circ}\frac{1}{2}$; but a certain portion was fluid, and the rest solid; and one part with 3, at $99^{\circ}.5$.

One would be apt to think, from these experiments, that sulphur and phosphorus might be combined in all proportions; but the observation on the 5th led me to suspect that it might have been applied to some others if the results had been carefully noted.—I mixed $18\frac{1}{2}$ grains of phosphorus and 13 of sulphur in a graduated tube, put in water, and immersed the whole into water of 160° . The phosphorus having been rendered fluid as usual, at 100° , gradually reduced the sulphur, till the whole assumed a liquid form of the specific gravity 1.44. It remained uniformly fluid at 45° , but was wholly congealed at 42° . Here were two atoms of phosphorus united to one of sulphur. I then added $6\frac{1}{2}$ grains of sulphur, making the mixture $18\frac{1}{2}$ phosphorus, and $19\frac{1}{2}$

sulphur ; this new mixture was reduced to uniform fluidity at 170° , and was of 1.47 specific gravity ; reduced to 47° , one part was fluid and the other solid, the latter being at the bottom of the tube. This solid part was not completely reduced to fluidity in the temperature 100° . This seems to indicate that two distinct combinations took place ; the one, two atoms of phosphorus and one of sulphur, liquid at 47° ; the other, one atom of phosphorus and one of sulphur, solid under 100° . I next added $6\frac{1}{2}$ grains more of sulphur, making in the whole $18\frac{1}{2}$ phosphorus and 26 sulphur, consequently in such proportion as to afford a union of one atom of each ; the union was completed in a temperature of 180° : the specific gravity was 1.50 Cooled down to 80° , the whole was solid ; heated to 100° , the whole became a semi-liquid, uniform mass. Being afterwards heated to 140° , the whole became fluid ; but upon cooling again, the greatest part congealed at 100° , but $\frac{1}{3}$ d or $\frac{1}{4}$ th remained liquid down to 47° .—From these experiments, it is most probable that one atom of each forms a combination which is solid at 100° or below ; but that being heated, it is apt to run into the other mode of combination, or that constituted of two atoms of phosphorus and one of sulphur. The properties of these

two species of sulphuret of phosphorus I have not had an opportunity to investigate. The water in the tube is evidently decomposed in part by the compound ; it becomes milky, probably through the oxide of sulphur, and both sulphuretted and phosphuretted hydrogen seem to be formed in small quantities at temperatures above 160°.

SECTION 11.

FIXED ALKALIES.

The fate of the two fixed alkalies, potash and soda, has been rather remarkable. They had long been suspected to be compound elements, but no satisfactory proof was given. At length Mr. Davy, by his great skill and address in the application of galvanism to produce chemical changes, seemed to have established the compound nature of these elements, both by analysis and synthesis. They appeared to be *metallic oxides*, or peculiar metals united to oxygen. Consistent with this idea, some account of the metals, denominated *potassium* and *sodium*, has been given in this work. (See page 260). But from what follows, it appears most probable, that these metals are

compounds of potash and soda with hydrogen, and that the two fixed alkalies still remain among the undecomposed bodies.

1. *Potash.*

Potash is obtained from the ashes of burned wood. Water dissolves the saline matter of the ashes, and may then be poured off and evaporated by artificial heat: the salt called *potash* remains in the vessel. If the salt so obtained be exposed to a red heat, it loses combustible matter, becomes white, and is in part purified: in commerce it is then called *pearl-ash*. This mass is still a mixture of various salts, but is constituted chiefly of *carbonate of potash*. In order to obtain the potash separate, let a quantity of *pearl-ash* (or what is still better, *salt of tartar* of the shops, which is this *pearl-ash* reduced almost to pure carbonate of potash) be mixed with its weight of water, and the mixture be stirred; after the undissolved salt has subsided, pour off the clear solution into an iron pan, and mix with it a portion of hydrate of lime, half the weight of the liquid; then add a quantity of water equal to the weight of the ingredients, and boil the mixture for several hours, occasionally adding more water to supply the waste. When

the liquid is found not to effervesce with acids, the ebullition may be discontinued. After the lime has subsided, the clear liquid is to be decanted, and then boiled down in a clean iron pan till it assumes a viscid form, and acquires almost a red heat. It may then be poured into molds, &c. and it immediately congeals. The substance so obtained is potash nearly pure; but it still contains a considerable portion of water, some foreign salts, oxide of iron, and frequently some unexpelled carbonic acid. The water may amount to 20 or 25 per cent. upon the whole weight, and the other substances to 5 or 10 per cent. In this process, the carbonic acid of the potash is transferred to the lime.

If potash of still greater purity be required, the method practised by Berthollet may be pursued. The solid potash obtained as above must be dissolved in alcohol; the foreign salts will fall to the bottom insoluble; the liquid solution may then be decanted into a silver bason, the alcohol be evaporated, and the fluid potash exposed to a red heat. It may be poured out upon a clean polished surface, where it instantly congeals into solid plates of potash, which are to be broken and put into well stoppered bottles, to prevent the access of air and moisture. This potash is a solid,

brittle, white mass, consisting of about 84 parts potash and 16 water, in 100 parts, and is the purest that has ever yet been obtained.

Potash may be exhibited in a more regular crystalline form by admitting more water to it. If the solution be reduced to the specific gravity of 1.6, or 1.5, upon cooling, crystals will be formed, containing about 53 per cent. of water, or more, if the air is cold. These crystals are called *hydrate of potash*. Hence solid hydrate of potash may be formed, containing from 84 per cent. of potash to 47, or under.

Potash has a very acrid taste ; it is exceedingly corrosive if applied to the skin, so as to obtain the name of *caustic*. The specific gravity of the common sticks of potash used by surgeons, I find to be 2.1 ; but these are a mixture of potash and carbonate of potash, with 20 or 30 per cent. of water. If pot-ash were obtained pure, I apprehend its specific gravity would be about 2.4.

When crystals of potash (that is. the hydrate) are exposed to heat, they become liquid, the water is gradually dissipated with a hissing noise, till at length the fluid acquires a red heat. It then remains tranquil for some time ; but if the heat be increased, white fumes begin to arise copiously. The alkali and water

both evaporate in this case ; therefore, the process cannot be used to expel the last portion of water from the alkali. If the hydrate be taken in the red hot and tranquil state, it contains 84 per cent. potash and 16 water. This is ascertained by saturating a given weight of it with sulphuric acid, when sulphate of potash is formed free from water, and 100 parts of the hydrate give only 84 parts to the new compound.

Water has a strong affinity for potash. If a portion of the 84 per cent. hydrate be put into as much water, great heat is immediately produced, equal to that of boiling water. But it is observable that the crystallized hydrate containing much water, when mixed with snow, produces excessive cold. When potash is exposed to the air, it attracts moisture and carbonic acid, becoming a liquid carbonate. Potash dissolved in water, and kept in a stoppered bottle, retains its causticity : it is called *alkaline ley*, and may be had of various strengths and specific gravities.

Potash, and the other alkalies, change vegetable colours, particularly blues, into green.—Potash is of great utility in the arts and manufactures, particularly in bleaching, dying, printing, soap and glass manufactures. It unites with most acids to form salts. It does

not unite with any of the simple substances, as far as is yet known, except hydrogen, and that in a circuitous way, as will presently be noticed. The hydrate of potash unites with sulphur; but the compound, consisting of three or more principles, cannot yet be discussed.

The theory of the nature and origin of potash still remains in great obscurity. The great question, whether it is a constituent principle of vegetables, or formed during their combustion, is not yet satisfactorily answered. One circumstance is favourable to the investigation of the nature of potash, the weight of its ultimate particle is easily ascertained; it forms very definite compounds with most of the acids, from which it appears to be 42 times the weight of hydrogen. The following proportions of the most common salts with base of potash, are deduced from my experience; they are such that good authorities may be found both for greater and less proportions of the different elements,

	per cent.		
Carbonate of potash,	31.1,	acid + 68.9 base,	as 19 : 42
Sulphate	44.7	+ 55.3	34 : 42
Nitrate	47.5	+ 52.5	38 : 42
Muriate	34.4	+ 65.6	22 : 42

The above salts are capable of sustaining a red heat, and may therefore be supposed to be free from water ; at all events, the potash must contain the same quantity of water in combination with the respective acids, as appears from the uniformity of its weight. The above numbers, 19, 34, 38 and 22 represent, as the reader will recollect, the weights of the atoms of the respective acids, except the nitric, which is double. As water has so strong an affinity for potash, and as the weight of the elementary particle of potash above deduced is more than five times that of water, it may still be supposed that water enters into the constitution of potash, or that it is compounded of some of the lighter earths with azote, oxygen, &c. From present appearances, however, the notion that potash is a simple substance seems more probable than ever.

From the above observations, it appears that potash ought still to be considered as a simple substance, and would require to be placed among such substances, but that it cannot be obtained alone. In that state which approaches nearest to purity it is a hydrate, containing at least 1 atom of water united to 1 of potash, amounting to 16 per cent. of water. This hydrate is therefore a *ternary* compound, or *one* of three elements, and ought to be post-

poned till the next chapter : but, in the present state of chemical science, utility must be allowed in some instances to supersede methodical arrangements. The fixed alkalies are most useful chemical agents, and the sooner we become acquainted with them the better ; more especially, as some of the first chemists of the present age have been led into considerable mistakes, by presuming too much upon their knowledge of the nature and properties of these familiar articles.

In the *Memoires de l'Institut de France*, 1806, Berthollet published researches on the laws of affinity, from which some extracts are given in the *Journal de Physique* for March 1807.—By these, it appears that he found sulphate of barytes to consist of 26 acid and 74 base, and sulphate of potash of 33 acid and 67 base. The former of these results was corroborated by the previous experience of Thénard ; but both are so remote from the uniform results of other chemists, that they could never be generally adopted. At length Berthollet discovered the error, and has announced it in the 2d vol. of the *Memoires d'Arcueil*. It consisted in mistaking the hydrates of barytes and potash for pure barytes and potash. It seems to have been generally adopted, but certainly prematurely, that barytes and potash,

in a state of fusion, were pure, or free from water. But upon due investigation, he found that fused potash contains 14 per cent. of water : my experience as well as theory, leads me to adopt 16 per cent. of water, which accords with the position of 1 atom of each of the elements uniting to form the hydrate ; namely, 42 by weight of potash with 8 of water. This discovery reconciles the jarring results on the proportions of the above neutral salts, and throws light upon some other interesting subjects of chemical analysis.

2. *Hydrate of Potash.*

Upon turning my attention to this subject, I soon perceived the want of a table exhibiting the relative quantities of potash and water in all the combinations of these two elements. In a state of solution, the specific gravity may be taken as a guide ; but this is not quite so convenient when the compound is in a solid form. I found nothing of the kind in any publication, and therefore undertook a course of experiments to determine the relative quantities of potash, &c. in the various solutions. The results are contained in the following table, which I would have to be considered

only as an approximation to truth ; but it will certainly have its use till a more complete and accurate one be obtained. Dr. Henry was so obliging as to facilitate my progress, by presenting me with portions of the fixed alkalies, prepared after Berthollet's method.

Table of the quantity of real potash in watery solutions of different specific gravities, &c.

Atoms. Potash Water	Potash per cent. by weight.	Potash per cent. by measure.	Specific gravity.	Congeeing point.	Boiling point.
1+ 0	100	240	2.4	unknown.	unknown
1+ 1	84	185	2.2	1000°	red heat
1+ 2	72.4	145	2.0	500°	600°
1+ 3	63.6	119	1.88	340°	420°
1+ 4	56.8	101	1.78	220°	360°
1+ 5	51.2	86	1.68	150°	320°
1+ 6	46.7	75	1.60	100°	290°
1+ 7	42.9	65	1.52	70°	276°
1+ 8	39.6	58	1.47	50°	265°
1+ 9	36.8	53	1.44	40°	255°
1+10	34.4	49	1.42		246°
	32.4	45	1.39		240°
	29.4	40	1.36		234°
	26.3	35	1.33		229°
	23.4	30	1.28		224°
	19.5	25	1.23		220°
	16.2	20	1.19		218°
	13.	15	1.15		215°
	9.5	10	1.11		214°
	4.7	5	1.06		213°

Remarks on the Table.

The first column contains the number of atoms of potash and water in the several com-

binations to 10 atoms of water : the weight of an atom of potash is taken to be 42, and 1 of water 8. From these data the second column is calculated. There did not appear any striking characteristic of distinction between the first, second, third, &c. hydrates, (if they may be so called) except that the first bears a red heat in the liquid form, with tranquillity and without loss of weight. Before this, the water is gradually dissipated with a hissing noise and fumes. I remarked, however, that when a solution of potash is boiled down till the thermometer indicates upwards of 300° , the evaporation of the water, and the rise of the thermometer, are desultory ; that is, the operations appear somewhat stationary for a time, and then advance quickly ; how far this may arise from the nature of the compound, or from the imperfect conducting power of the liquid in those high temperatures, I could not determine without more frequent repetitions of the experiment.

The third column is, as usual, obtained by multiplying the second column by the specific gravity ; it is often more convenient in practice to estimate quantity by measure than by weight.

The fourth column denotes the specific gravity ; below 1.60 the hydrate is completely

fluid, or may be made so by a moderate heat ; but above that temperature, I found some difficulty in ascertaining the specific gravity, and was obliged sometimes to infer it from the tenor of the table. The common sticks of potash of the druggists are of the sp. gr. 2.1, which I found by plunging them into a graduated tube filled with mercury, and marking the quantity that overflowed. These sticks are a mixture of hydrate and carbonate. Real potash must, I conceive, be heavier than they are. The relation of the second and fourth columns was ascertained by taking a given weight of the alkaline solution, saturating it with test sulphuric acid (1.134), and allowing 21 grains of alkali for every 100 measures of acid (containing 17 real) which the alkali required.

The 5th column denotes the temperatures at which the different hydrates congeal or crystallize. This part of the subject deserves much more accurate enquiry than I have been able to bestow upon it. No doubt the different hydrates might be distinguished this way. Proust talks of a crystallized hydrate of potash, containing 30 per cent. of water ; and Lowitz of one containing 43 per cent. of water. They calculate, I presume, upon the supposition of fused potash being free from water ; if so,

Proust's hydrate is the fourth of our table, and Lowitz's the sixth. I would not have much trust to be put in the temperatures I have marked in this column.

The sixth column indicates the temperatures at which the different specific gravities boil. This is easily ascertained, except for the high degrees, in which an analysis of the hydrate was required upon every experiment. I believe the results will be found tolerably accurate. As the range of temperature is large, this may be found a very convenient method of ascertaining the strength of alkaline solutions, when the specific gravities are unknown.

3. *Carbonate of Potash.*

Though it be premature to enter into the nature of carbonate of potash, a triple compound, yet its utility as a test is such as to require it to be noticed in the present section. Indeed it may generally be a substitute for the hydrate of potash, and it can much more readily be procured in a state of comparative purity. The carbonate I mean is that which consists of one atom of acid united to one of potash, which by some writers is called a *sub-carbonate*. It is, of course, constituted of 19

parts of acid by weight united to 42 of potash. This salt is to be had in tolerable purity of the druggists, under the name of *salt of tartar* ; but when it is to be used in solution for pure carbonate, a large quantity of the salt, and a small quantity of water, are to be mixed and agitated ; then let the undissolved salt subside, and pour off the clear solution, which may be diluted with water, &c.

This salt is well known to be, like the dry hydrate of potash, very deliquescent. I took 43 grains of carbonate of potash that had just before been made red hot, put them into a glass capsule exposed to the air ; in one day the weight became 50 grains ; in three days, 61 grains ; in seven days, 75 grains ; in 11 days, 89 grains ; in 21 days, 89+ grains ; in 25 days, 90 grains. The specific gravity was 1.54 nearly. All the water is, however, driven off by a moderate heat ; namely, that of 280°. It supports a high red heat before fusion, and when fused loses no weight, remaining without sublimation, and undecomposed. I ascertained that it was a perfect carbonate, by dissolving 61 grains of pure dry salt in lime water, when 42 grains of carbonate of lime were thrown down, corresponding to 19 grains of carbonic acid.

Table of the quantity of real carbonate of potash in watery solutions of different specific gravities.

Atoms. Carb. of Pot. Water	Carb. Potash per cent. by weight.	Carb. Potash per cent. by measure.	Specific gravity.	Boiling point.
1 + 0	100	260	2.60	280°
1 + 1	88.4	212	2.40	265°
1 + 2	79.2	170	2.15	258°
1 + 3	71.8	140	1.95	252°
1 + 4	65.6	118	1.80	247°
1 + 5	60.4	103	1.70	244°
1 + 6	56	91	1.63	241°
1 + 7	52.1	82	1.58	238°
1 + 8	48.8	75	1.54	235°
1 + 9	45.8	69	1.50	232°
1 + 10	43.3	63	1.46	229°
	41.7	60	1.44	227°
	39	55	1.41	225°
	36.2	50	1.38	222°
	33.6	45	1.34	220°
	30.5	40	1.31	218°
	27.3	35	1.28	217°
	24	30	1.25	216°
	20.5	25	1.22	215°
	16.8	20	1.19	214°
	13.2	15	1.15	214°
	9	10	1.11	213°
	4.7	5	1.06	213°

This table is similar in structure to the preceding. The first column contains the number of atoms of water joined to one of carbonate of potash, which last weighs 61. The second contains the weight of carbonate of potash per cent. in the compound, and the third the grains of carbonate in 100 water grain measures of the compound, found by multiplying

the numbers in the second and fourth columns together. The fourth contains the specific gravities ; the relations of these to the quantities in the second column were found, by taking a given weight of the solution, and saturating it with a certain number of measures of test sulphuric acid (1.134), allowing 21 real potash, or $30\frac{1}{2}$ carbonate, for every 100 measures of acid required ; because such acid contains 17 per cent. by measure of real sulphuric acid, and that requires 21 of potash.

The strongest solution of this salt that can be obtained is of the specific gravity 1.54. This consists of 1 atom of carbonate and 8 of water ; but by putting dry carbonate into that solution, various mixtures may be formed up to the specific gravity 1.80 ; above that the specific gravity is scarcely to be obtained but by inference. I could not obtain a solid stick of fused carbonate but what was spongy, I suppose from incipient decomposition. It may be observed, that the specific gravity 1.25, which contains 30 per cent. of carbonate, is that which I prefer as a test for acids ; because the solution contains 21 per cent. pure potash, and 100 measures of it consequently require 100 measures of the test acids.

I found a specimen of the pearl-ash of commerce to contain 54 parts carbonate of potash,

22 parts of other salts, and 24 parts of water in the hundred.

The fifth column denotes the temperature at which the saline solutions boil. This will be found generally a good approximation to truth. I observed the thermometer did not rise above 280° as long as any visible moisture remained ; as soon as that vanished, the salt assumed the character of a hard and perfectly dry substance.

In the course of these experiments, I took a quantity of carbonate of potash, and heated it red hot ; then weighed it ; after which I put to it as much water as afforded 1 atom to 1 ; namely, 8 parts water to 61 salt. The salt was then pulverized in a mortar ; it was put out upon white paper, and appeared a white, dry salt ; but upon pouring it back into the mortar, some particles of the salt adhered to the paper. The same quantity of water was again put to it. Upon mixing them with a knife, the whole mass assumed a pasty consistence, and adhered to the knife in the shape of a ball ; after being well rubbed in the mortar, it again assumed a white, dry appearance. Upon paper, it seemed like salt of tartar some time exposed to the air. Several particles stuck to the paper, but were easily removed by a knife. The addition of another

atom of water reduced the compound to the consistence of bird-lime ; but after standing it cut like half dried clay. The next atom of water reduced it to the consistence of bookbinders paste. The fifth atom of water reduced it to a thick fluid, consisting of dissolved and undissolved salt. This, by the successive application of like portions of water, became a perfect fluid with 8 atoms of water to 1 of carbonate of potash. Its specific gravity was 1.5 ; but there was some undissolved sulphate of potash subsided, the salt of tartar not having been previously purified.

4. *Potassium, or Hydruret of Potash.*

Since writing the articles on Potassium and Sodium (page 260 and seq.), and the subsequent articles on fluoric and muriatic acid (page 277 and seq.), a good deal more light has been thrown on these subjects. Two papers on the subjects have been published by Mr. Davy ; a series of essays by Gay Lussac and Thenard, are contained in the 2d vol. of the *Memoires d'Arcueil* ; the same volume also contains a paper by Berthollet, announcing an important discovery relating to the fixed alkalies ; namely, that in a state of fusion by

heat, they contain a definite proportion of water in chemical combination. Upon reconsidering the former facts, and comparing them with the more recent ones, I am obliged to adopt new views respecting the nature of these new metals. Mr. Davy still adheres to his original views, and which indeed were the only rational ones that could be formed (supposing the fused alkalis to contain no water), namely, that potash is the oxide of potassium; Gay Lussac and Thenard, on the contrary, consider potash as undecomposed, and potassium a compound of hydrogen and potash, analogous to the other known compounds of hydrogen and elementary principles. This last is the only one, I think, that can be admitted either from synthetic or analytic experiments, so as to be reconcileable with the facts; but I do not coincide with all the conclusions which the French chemists have deduced. Mr. Davy has furnished us with the most definite and precise facts; and though I was led to controvert some of them (see page 289 and seq.), it was principally through my having adopted his views of the nature of potassium: I am now persuaded those results were more accurate than I imagined.

Mr. Davy first attempted to decompose the fixed alkalis, by applying Voltaic electricity

to saturated watery solutions ; in this case, oxygen and hydrogen gas were obtained, evidently proceeding, as he concluded, from the decomposition of the water. But when any potash that had previously been fused, was substituted for the watery solution, no hydrogen gas was given out at the negative pole, but potassium was formed, and pure oxygen was given out at the positive pole. The residual potash was unaltered. The conclusion he drew was, that the potash was decomposed into potassium and oxygen. But it now appears, that fused potash is composed of 1 atom of water and 1 of potash. The electricity operates upon this last atom of water to separate its elements ; it succeeds in detaching the atom of oxygen, but that of hydrogen draws the atom of potash along with it, forming an atom of potassium. The atom of hydrate weighing 50 ($= 42 \text{ potash} + 8 \text{ water}$) is decomposed into one of potassium, weighing 43, and one of oxygen weighing 7. Hence the atom of potassium is composed of 1 potash + 1 hydrogen, weighing 43 ; and not of 1 potash — 1 oxygen, weighing 35, as stated at page 262.

The method of obtaining potassium, discovered by the French chemists, is to find the first hydrate of potash in a state of vapour over

red hot iron turnings, in an iron tube intensely heated; hydrogen gas is given out, potassium is formed and condensed in a cool part of the tube, and part of the potash is found united to the iron. In this mode of producing potassium, its constitution is not so obvious as in the former. The two methods, however, together, shew that fused potash contains both oxygen and hydrogen, which is now abundantly confirmed by experiments of a different kind. It seems probable that in the latter method the hydrate of potash is partly decomposed into potash and water, and partly into potassium and oxygen; in both cases the iron acquires the oxygen.

The specific gravity of potassium is .6, or .796, according to Davy; but .874 according to Gay Lussac and Thenard. The levity of it, combined with its volatility at a low red heat, agrees with the notion of its being potash and hydrogen, or *potassetted hydrogen*, resembling the other known compounds of sulphur, phosphorus, charcoal, arsenic, &c. combined with hydrogen.

When burned in oxygen gas, potassium produces potash as dry as possible to be procured, according to Mr. Davy; that is, the first hydrate. When potassium is thrown into water it burns rapidly, decomposing the water, and

giving off hydrogen. Calculating the oxygen from the quantity of hydrogen, Mr. Davy finds 100 (hydrate of) potash contain from 13 to 17 oxygen : Gay Lussac seems to make it 14. For, 2.284 grammes of potassium gave 649 cubic centimetres of hydrogen ; reduced, 35.5 grains gave 34.5 cubic inches English measure, which correspond to 17.25 inches of oxygen = 5.9 grains. Hence $35.3 + 5.9 = 41.2$ grains of hydrate ; and $41.2 : 5.9 :: 100 : 14$. But this is exactly the quantity that theory would assign ; for, 43 potassium + 7 oxygen = 50 hydrate, which gives just 14 oxygen in the hundred.

Potassium burns spontaneously in oxymuriatic acid gas ; muriate of potash is formed, and probably water. It decomposes sulphuretted, phosphuretted, and arseniuretted hydrogen gas, according to Gay Lussac and Thenard, and unites to the sulphur, &c. with some of the hydrogen. Mr. Davy finds tellurium to unite with the hydrate of potash by Voltaic electricity without decomposing it. Potassium burns in nitrous gas and nitrous oxide, forming dry hydrate of potash, and evolving azote. It burns in sulphurous and carbonic acid, and in carbonic oxide ; hydrate of potash which unites to the sulphur is formed, or hydrate of potash and charcoal.

The combustion of potassium in muriatic acid gas is particularly worthy of notice. Both Mr. Davy and the French chemists agree that when potassium is burned in muriatic acid gas, muriate of potash is formed, and hydrogen evolved, which agrees in quantity with that evolved in the decomposition of water by the same quantity of metal. But, what is most astonishing, they both adopt the same explanation, when their different views of the constitution of potassium require them to be opposite. Mr. Davy had two ways in which he might account for the phenomenon; the one was to suppose that a part of the acid was decomposed, and furnished the oxygen to the metal to form the oxide (potash), which joined to the remainder of the acid, and the hydrogen was an evolved elementary principle of that part of the acid decomposed; and the other, to suppose that the acid gas contained in a state of union just as much water as was sufficient to oxidate the metal (this would have been thought an extraordinary circumstance a few years ago). Either of these positions was consistent; but he adopted the latter, and seemed to confirm it by shewing that a given quantity of muriatic acid gas afforded the same quantity of muriate of silver, whether combined previously with potash or potassium.

This explanation did not meet my views as well as the former. I endeavoured to account for the facts (page 289) on the notion of a decomposition of the acid. Two circumstances conspired to incline me to this view : The one was, that hydrogen seemed on other accounts to be a constituent of muriatic acid ; the other was, that water does not appear in any other instance to be combined with any elastic fluid ; I mean in such way that if the water be removed, the rest of the molecule will carry along with it the character of the whole. In one respect I mistook the data, having over-rated the weight of muriatic acid gas.—I would now be understood to abandon the explanation founded on the decomposition of the acid ; and to adopt the much more simple one that the muriatic acid combines with the potash of the potassium, at the same instant expelling the hydrogen ; in this way there is no occasion for any water either combined or otherwise. It exceeds my comprehension how Gay Lussac and Thenard should insist so largely on the opinion that muriatic acid gas contains water, and that principally, as it should seem, in order to account for the hydrogen evolved during the combustion of potassium, and the supposed oxydation of the metal.

It has been stated that potassium burns in silicated fluoric acid gas (page 283), the result is fluat of potash and some hydrogen. The theory of this is not obvious.

Potassium acts upon ammoniacal gas. Mr. Davy found that when 8 grains of the metal were fused in ammoniacal gas, between $12\frac{1}{2}$ and 16 cubic inches of the gas were absorbed, and hydrogen evolved corresponding to the oxydation of the metal by water, that is, 1 atom of hydrogen for 1 atom of potassium. The new compound becomes of a dark olive colour. By applying a greater degree of heat the ammonia is in part expelled again; but part is also decomposed. Gay Lussac and Thenard say, that by admitting a few drops of water to the compound, the whole of the elements of the ammonia are recoverable, and nothing but caustic potash remains. Mr. Davy affirms the results of the decomposition to be somewhat different. It seems pretty evident, that in this process two atoms of ammonia unite to one of potassium, expelling its hydrogen at the same moment. For, 43 grains of potassium would require 12 of ammonia; and therefore 8 will require $2\frac{1}{4}$ grains, which correspond to $12\frac{1}{2}$ cubic inches.

5. *Soda.*

Soda is commonly obtained from the ashes of plants growing on the sea-shore, particularly from a genus called *salsola* ; in Spain, where this article is largely prepared, it is called *barilla*. In Britain, the various species of *fucus* or sea-weed are burnt, and their ashes form a mixture containing some carbonate of soda ; this mixture is called *kelp*. Soda is found in some parts of the earth combined with carbonic acid, and in others combined with muriatic acid, as minerals ; and hence it has been called the *fossil* or *mineral* alkali, to distinguish it from potash or the *vegetable* alkali.

To obtain soda in as pure a state as possible, recourse must be had to a process similar to that for obtaining potash. Pure carbonate of soda must be treated with hydrate of lime and water ; the carbonate of soda is decomposed ; the soda remains in solution in the liquid, the carbonic acid unites to the lime, and the new compound is precipitated. Afterwards the clear liquid must be decanted and boiled down ; the water gradually goes off with a hissing noise till the soda acquires a low red heat, when the alkali and remaining water become a tranquil liquid. This liquid may be

run out into molds, &c. when it instantly congeals into a hard mass, and is then to be preserved in bottles for use. If still greater heat be applied, the alkali and water are together dissipated in white fumes.

Soda thus obtained is a solid, brittle, white mass, consisting of about 78 parts pure soda and 22 water per cent. ; according to d'Arcet (*Annales de Chimie*, Tome 68, p. 182) the alkali is only 72 ; but I believe that is too low. With more water, soda may be had in crystals, like potash, probably containing 50 or 60 per cent. of water. Soda, like potash, is extremely caustic ; it is deliquescent, and produces heat when dissolved in water. The specific gravity of fused soda I find to be 2, by pouring it into a graduated glass tube. There is some reason to apprehend that pure soda, could it be obtained, would be specifically heavier than potash, though its ultimate particle is certainly of less weight than that of the latter. The properties and uses of soda are much the same as those of potash ; indeed, the two alkalies were long confounded, on account of their resemblances. The compounds into which they enter are in many instances essentially different, and the weights of their atoms are very unequal. The origin of soda in vegetables is somewhat obscure, though it may be derived

from the muriate of soda in the water of the sea.

The weight of an atom of soda is easily derived from the many definite compounds which it forms with the acids ; it appears to be 28 times that of hydrogen. The carbonate, sulphate, nitrate and muriate of soda, are all well known salts. From a comparison of my own experiments with those of others on the proportions of these salts, free from water, I deduce the following :

	per cent.			
Carbonate of soda	40.4 acid, +	59.6 base, as	19 : 28	
Sulphate	— 54.8 —	45.2 —	34 : 28	
Nitrate	— 57.6 —	42.4 —	38 : 28	
Muriate	— 44 —	56. —	22 : 28	

These proportions scarcely differ 1 per cent. from those of Kirwan and other good authorities. The numbers 19, 34, 38 and 22 being the weights of the respective atoms of acids, the number 28 must be the weight of an atom of soda. Hence we find that soda is a peculiar element, differing from every one we have yet determined in weight. From the weight of the element soda, it may be suspected to be a compound of water, oxygen, or some of the lighter elements ; but from present appearances, no such suspicion seems well founded. Soda should then, with propriety, be treated

as an elementary principle. We shall proceed to the hydrate, the carbonate, and the hydruret of soda, for reasons which have been given under the head of potash.

6. *Hydrate of Soda.*

Soda, in what has till lately been considered its pure state, is combined with water. The smallest portion of water seems to be one atom to one of soda ; that is, 8 parts of water by weight to 28 of soda, or 22 per cent. of water. I have not obtained soda purer than that of d'Arcet of 72 per cent. ; but it always contained some carbonic acid and other impurities, which incline me to conclude that 78 per cent. would be the highest attainable purity ; this may be called the first hydrate : it is hard and brittle, and twice the weight of water. The second, third, fourth, and fifth hydrates are, I apprehend, crystalline ; but my experience does not warrant me to decide upon their nature ; the sixth, and those with more water, are all liquid at the ordinary temperature ; their specific gravity is obtained in the usual way, and the corresponding quantity of real alkali is ascertained by the test acids.

The following Table for soda, is constructed after the manner of that for potash (page 476).

It will be found moderately accurate ; but I could not give it the attention it deserves. Nothing of the kind has been published to my knowledge ; yet, such tables appear to me so necessary to the practice of chemical enquiries, that I have wondered how the science could be so long cultivated without them.

That solution which will be found most convenient for a test, is of the specific gravity 1.16 or 1.17, and contains 14 per cent. by measure of real alkali ; consequently, 100 measures require the same volume of acid tests for their saturation.

Table of the quantity of real soda in watery solutions of different specific gravities, &c.

Atoms. Soda. Water.	Soda per cent. by weight	Soda per cent. by measure.	Specific gravity.	Congeaing point.	Boiling point.
1 + 0	100	230?	2.30?	unknown.	unknown
1 + 1	77.8	156	2.00	1000°	red hot
1 + 2	63.6	118	1.85	500°	600°
1 + 3	53.8	93	1.72	250°	400°
1 + 4	46.6	76	1.63	150°	300°
1 + 5	41.2	64	1.56	80°	280°
1 + 6	36.8	55	1.50		265°
	34	50	1.47		255°
	31	45	1.44		248°
	29	40	1.40		242°
	26	35	1.36		235°
	23	30	1.32		228°
	19	25	1.29		224°
	16	20	1.23		220°
	13	15	1.18		217°
	9	10	1.12		214°
	4.7	5	1.06		213°

7. *Carbonate of Soda.*

The salt I call *carbonate of soda*, is to be had of the druggists in great purity, under the name of purified sub-carbonate of soda. It is obtained in the form of large crystals, containing much water ; but when exposed to the air for some time, these crystals lose most of their water, and become like flour. I took 100 grains of fresh crystallized carbonate of soda, and exposed it to the action of the air in a saucer : In 1 day it was reduced to 80 grains ; in 2 days, to 64 grains ; in 4 days, to 49 grains ; in 6 days, to 45 grains ; in 8 days, to 44 grains ; and in 9 days it was still 44 grains, had the appearance of fine dry flour, and probably would have lost no more weight. It was then exposed to a red heat, after which it weighed 37 grains nearly. Now, it is a well established fact, that the common carbonate of soda, heated red, is constituted of 19 parts of acid and 28 of soda ; or 40.4 acid and 59.6 base, per cent. nearly. Klaproth says, 42 acid, 58 base ; Kirwan says, 40.1 acid, 59.9 base. It is equally well established that the crystallized carbonate recently formed in a low temperature, contains about 63 per cent. water, as above determined. All experience confirms

this; Bergman and Kirwan find 64 parts of water, Klaproth 62, and d'Arcet 63.6. Hence the constitution of the crystallized carbonate is easily ascertained; for, if $37 : 63 :: 47 (= 19 + 28) : 80$, the weight of water attached to each atom of the carbonate; that is, 10 atoms of water unite to 1 of carbonate of soda to form the common crystals. Again, if $47 : 8 :: 37 : 6.3 =$ the weight of water attached to 37 parts of carbonate of soda, to correspond with 1 atom of water; but $37 + 6.3 = 43.3$; from this it appears that 100 parts of crystallized carbonate being reduced to 44 or 43.3, indicates that all the 10 atoms of water are evaporated, except one. It should seem, then, that the ordinary efflorescence of this salt is not dry carbonate, but 1 atom of carbonate and 1 of water. This supposition is confirmed by experience; for, in 5 days the above 37 grains of heated carbonate became 44 grains by exposure to the air.

There is another very remarkable character of the carbonate of soda, which, however, I apprehend will be found to arise from a general law in chemistry; when a quantity of common crystallized carbonate is exposed to heat in a glass retort, as soon as it attains a temperature about 150° , it becomes fluid as water; but when this fluid is heated to 212° ,

and kept boiling a while, a hard, small grained, salt is precipitated from the liquid, which, upon examination, I find to be the *fifth* hydrate, or one atom of carbonate of soda united to 5 atoms of water. For, 100 grains of this salt lose 46 by a red heat ; but 1 atom of carbonate weighs 47, and 5 atoms of water weigh 40, together making 87 ; now, if 87 of such salt contain 40 water, 100 will contain 46.—The clear liquid resting upon the fifth hydrate has the specific gravity 1.35 ; on cooling, the whole liquid crystallizes into a fragile, icy mass, which dissolves with a very moderate heat. This appears by the test acid to be constituted of 1 atom of carbonate and 15 atoms of water. Thus the tenth hydrate, by heat, is resolved and converted into the fifth and fifteenth ; in like manner, probably, the fifteenth might be transformed into the tenth and thirtieth hydrate. When any solution below 1.35 sp. gravity is set aside to crystallize, the fifteenth hydrate is formed in the liquid, and finally the residuary liquid is reduced to the sp. gravity of 1.18. By treating this liquid solution with the test acids, it will be found to consist of 1 atom of carbonate to 30 of water. It is of course that solution which the common crystals of carbonate always form, when duly agitated with water : or a *saturated* solution at

the mean ordinary temperature of the atmosphere. By heat, other liquid solutions may be obtained from 1.85 to 1.35 ; but they soon crystallize ; such may be called *supersaturated* solutions.

The different species of hydrates in crystals have different specific gravities, as might be expected ; that of the fifteenth is 1.35, that of the tenth is 1.42, and that of the fifth 1.64. These were found by dropping the crystals into solutions of carbonate of potash till they were suspended, or by weighing them in saturated solutions of the same. I could not ascertain that of the pure carbonate and the first hydrate:

When carbonate of soda is used for a test alkali, the specific gravity 1.22 would be that solution which contains 14 per cent. by measure of alkali, of which 100 measures would require 100 of test acid for saturation ; but, as that solution cannot be preserved without partial crystallization, it will be better to substitute a solution of half the strength ; namely, that of 1.11 ; then 200 measures of the solution will require 100 of test acid.

The following Table contains the characters of various combinations of carbonate of soda and water, resulting from my investigations.

Table of the quantity of real carbonate of soda in watery compounds of different specific gravities.

Atoms. Carb. Soda. Water.	Carb. Soda per cent. by weight.	Carb. Soda per cent. by measure.	Specific gravity.	Congeeing point.	Boiling point.
1 + 0	100	200?	2.00?	unknown.	unknown.
1 + 1	85.5	162?	1.90?	—	—
1 + 5	54	89	1.64	—	—
1 + 10	37	52.5	1.42	150°	—
1 + 15	28.8	39	1.35	80°	220°
1 + 20	22.7	28	1.26		217°
1 + 30	16.4	19.5	1.18		214°
		15	1.15		—
		10	1.10		213°
		5	1.05		—

The state of the carbonates in the above table it may be proper to notice. The pure carbonate is in the state of a dry powder ; so is the first hydrate, not to be distinguished in appearance from the pure carbonate. The fifth hydrate may be obtained in a crystalline mass, by heating the common carbonate till a proper portion of water is driven off. Its specific gravity is then easily found. The tenth hydrate is the common carbonate of the shops in crystals. The fifteenth hydrate may be had either in a liquid or solid form, as has been observed. The twentieth hydrate is a liquid without any remarkable distinction that I have discovered. It is liable to partial crystallization. The thirtieth hydrate is a liquid, being the saturated solution at common tem-

perature ; this would probably wholly crystallize at no very reduced temperature. The 2d, 3d, 4th, 6th, &c. hydrates, I have not found to offer any remarkable discrimination.

8. *Sodium, or Hydruret of Soda.*

According to the present state of our knowledge, the account of sodium given at page 262, will require some modification. As the article from which sodium has always been obtained is the first hydrate of soda, and as in the electrization of fused hydrate of soda, no gas is given out, according to Mr. Davy, but oxygen ; it follows of course that sodium must be a compound of soda and hydrogen, which may be called a hydruret of soda. Mr. Davy, conceiving soda in a state of fusion to be pure or free from water, as was the common opinion at the time, concluded that in the electrization of it the soda was decomposed into sodium and oxygen. This conclusion does not now appear to be tenable, though Mr. Davy still adheres to it, without having shewn what becomes of the water acknowledged to be present in every instance of the formation of sodium and potassium (Philos. Trans. 1809), to

the amount of 16 per cent. upon the compound.

Though Mr. Davy's original method of obtaining sodium by Voltaic electricity is the most instructive, as to the nature of the new product, yet, that of Gay Lussac and Thenard is the most convenient when a quantity of the article is required. That is, to pass the vapour of red hot hydrate of soda over iron turnings in a gun barrel, heated to whiteness. The hydrate seems to be decomposed in two ways; in part it is resolved into sodium, or hydruret of soda, and oxygen, the former of which distils into a cooler receptacle of the barrel, and the latter unites to the iron; in part, the hydrate is decomposed into water and soda, and the former again into oxygen, which unites to the iron, and hydrogen which escapes, whilst the soda unites to the iron or its oxide, forming a white metallic compound.

The specific gravity of sodium is stated by Mr. Davy at .9348. The weight of its ultimate particle (being 1 atom of soda and 1 of hydrogen) must be 29, and not 21, as stated at page 263. Consequently, 100 parts of the first hydrate of soda, or fused soda, contain 80.6 sodium and 19.4 oxygen per cent. This agrees with that one of Mr. Davy's experiments which gave the least portion of oxygen.

Sodium amalgamates with potasium, according to Gay Lussac and Thenard, in various proportions, and the alloys are more fusible than either of the simple metals, being in some cases liquid at the freezing point of water. In general, the properties of sodium are found to agree with those of potasium so nearly, as not to require distinct specification.

SECTION 12.

EARTHS.

The class of bodies called *earths* by chemists are nine in number; their names are *Lime*, *Magnesia*, *Barytes*, *Strontites*, *Alumine* or *Argil*, *Silex*, *Yttria*, *Glucine* and *Zircone*. The three last are recently discovered and scarce.

The earths constitute the bases of the fossil kingdom. Though they have frequently been suspected to be compound bodies, and several attempts have been made to decompose them, it does not yet appear but that they are simple or elementary substances. Some of the earths possess alkaline properties; others are without such properties; but they all partake of the following characters: 1. They are incombust-

tible, or do not unite with oxygen ; 2. they are inferior to the metals in lustre and opacity ; 3. they are sparingly soluble in water ; 4. they are difficultly fusible, or resist great heat without alteration ; 5. they combine with acids ; 6. they combine with each other, and with metallic oxides ; and, 7. their specific gravities are from 1 to 5

The latest attempt to decompose the earths is that of Mr. Davy ; he seems to have shewn, that some of the earths are analogous to the fixed alkalies, in respect to their properties of forming metals ; but these metals, like those of the alkalies, are most probably compounds of hydrogen and the respective earths.

1. *Lime.*

This earth is one of the most abundant ; it is found in all parts of the world, but in a state of combination, generally with some acid. When united with carbonic acid, it exists in large strata or beds in the form of chalk, limestone, or marble ; and it is from some of these that lime is usually obtained.

The common method of obtaining lime, is to expose pieces of chalk or limestone in a kiln for a few days to a strong red or white heat ; by this process, the carbonic acid is driven off,

and the lime remains in compact masses of nearly the same size and shape as the limestone, but with the loss of $\frac{2}{3}$ ths of its weight. It is probable, the intermixture of the limestone and coal in the combustion of the latter contributes, along with the heat, to the decomposition. The lime from chalk is nearly pure; but that from common limestone contains from 10 to 20 per cent. of foreign substances, particularly aluminic, silicic, and oxide of iron.

Lime thus obtained, which is commonly called *quicklime*, is white and moderately hard, but brittle. Its specific gravity, according to Kirwan, is 2.3. It is corrosive to animal and vegetable substances; and, like the alkalies, converts coloured vegetable infusions, particularly blue, into green. It is infusible. It has a strong attraction for water, so as to rob the atmosphere of its vapour; when exposed to the atmosphere, it gradually imbibes water, and in a few days falls down into a fine white dry powder; in this process, if pure, it acquires 33 per cent. in weight; after this, it begins to exchange its water for carbonic acid, and carbonate of lime is slowly regenerated. When 1 part of water is thrown upon 2 of quicklime, the lime quickly falls to powder with intense heat, calculated to be 800° (page

89) ; this operation is called *slaking* the lime, and is preparatory to most of its applications ; the new compound is denominated *hydrate of lime*, and appears to be the only proper combination that subsists between lime and water. By a red heat the water is driven off and the lime remains pure.

As lime combines with the principal acids hitherto considered, and forms with them perfectly neutral salts ; and as the proportions of these salts have been experimentally ascertained with precision, we are enabled to determine the weights of an atom of lime : thus,

	Acid.		Base.		
Carbonate of lime,	44	+	56	per cent	as 19 : 24.
Sulphate	— 58.6	+	41.4	—	34 : 24.
Nitrate	— 61.3	+	38.7	—	38 : 24.
Muriate	— 47.8	+	52.2	—	22 : 24.

Carbonate of lime is, I believe, universally allowed to contain either 44 or 45 per cent. of acid ; and sulphate is mostly supposed to contain 58 per cent. acid, the extremes being 56 and 60. The proportions of the other two salts have not been so carefully determined, but it is easy to satisfy one's self that the proportions assigned are not wide of the truth. Let 43 grains of chalk be put into 200 grain measures of the test nitric acid (1.143), or the

test muriatic (1.077), and it will be found that the lime will be wholly dissolved, and the acids saturated. Hence it follows that the elementary atom of lime weighs 24. I have formerly stated it at 23, supposing carbonate of lime to be, according to Kirwan, 45 acid + 55 lime per cent. The difference is scarcely worth consideration ; but experience seems to warrant 24 rather than 23 for the atom of lime.

When a large quantity of water is thrown upon a piece of quicklime, it sometimes refuses to slake for a time; perhaps this is caused by the water preventing the rise of temperature. In this case the water does not dissolve the lime ; hence it should seem that lime properly speaking is not soluble in water ; but hydrate of lime is readily soluble, though in a small degree. The solution is called *lime-water*, and is a very useful chemical agent.

Lime-water may be formed by agitating a quantity of hydrate of lime in water ; distilled or rain water should be preferred. One brisk agitation is nearly sufficient to saturate the water ; but if complete saturation is required, the agitation should be repeated two or three times. After the lime has subsided the clear liquid must be décanted and bottled for use. Authors differ as to the quantity of lime dis-

solved by water : some say that water takes $\frac{1}{500}$ of its weight of lime ; others, $\frac{1}{600}$. The fact is, that few have tried the experiment with due care. Dr. Thomson, in the 4th ed. of his chemistry says, from his experience, $\frac{1}{750}$. This is much nearer the truth than the other two. One author says, that water of 212° takes up double the quantity of lime that water of 60° does, but deposits the excess on cooling : no experimental proof is given. If he had said *half* instead of double, the assertion would have been nearly true. I have made some experiments on this subject, and the results are worth notice.

When water of 60° is duly agitated with hydrate of lime, it clears very slowly ; but a quantity of the lime-water may soon be passed through a filter of blotting paper, when it becomes clear and fit for use. I found 7000 grains of this water require 75 grains of test sulphuric acid for its saturation. Consequently it contained 9 grains of lime. If a quantity of this saturated water, mixed with hydrate of lime, be warmed to 130° and then agitated, it soon becomes clear ; 7000 grains of this water decanted, require only 60 grains of test sulphuric acid in order to produce saturation. The same saturated lime-water was boiled with hydrate of lime for two or three minutes, and

set aside to cool without agitation ; it very soon cleared, and 7000 grains being decanted, required only 46 grains of test acid to be neutralized, the test acid being as usual 1.134. Hence we deduce the following table.

1 part water of	takes up of lime	takes up of dry hydrate of lime
60° —————	$\frac{1}{778}$ —————	$\frac{1}{584}$
130° —————	$\frac{1}{972}$ —————	$\frac{1}{729}$
212° —————	$\frac{1}{1270}$ —————	$\frac{1}{952}$

This table leads us to conclude that water at the freezing temperature would take nearly twice the quantity of lime that water at the boiling temperature takes ; I had not an opportunity to try this in the season of these experiments ; but I am informed the calico-printers find a sensible difference in lime-water in different seasons of the year, and that in winter it is most subservient to their purpose, and least so in summer. As water takes up so small a portion of lime, and cold water more than warm, one would suppose it was the effect of *suspension* rather than *solution*. With this view I tried whether the addition of a little gum to the water would not increase its solvent power ; but the result was, that water of 60° took precisely the same quantity of lime, whether with or without gum. I found that a deep earthen vessel which had stood some

months with lime-water exposed to the air, still contained $\frac{1}{800}$ of its weight of lime.

Lime-water has an acrid taste, notwithstanding the small quantity of lime. It operates on colours like the alkalies. Certain blue colours, such as syrup of violets, are changed to green; infusion of litmus, which has been converted from blue to red by a little acid, has its blue colour restored by lime-water, and archil solution, reddened by an acid, is restored to its purple colour by lime-water. When exposed to the air, lime-water has a thin crust formed on its surface; this is carbonate of lime, the acid being derived from the atmosphere; it is insoluble, and falls to the bottom; in time the whole of the lime is thus converted into carbonate, and the water remains pure. If a person breathes through a tube into lime-water, it is rendered milky through the formation of carbonate, or if water containing carbonic acid be poured into it; but a double quantity of the acid forms a supercarbonate of lime, which is soluble in a considerable degree. Though lime is soluble in water in so small a quantity, yet a portion of distilled water may be mixed with $\frac{1}{1000}$ of its bulk of lime-water, and the presence of lime will be shewn by the test colours, or by nitrate of mercury, &c.

Lime combines with sulphur and with phos-

phorus: these compounds will be considered under the heads of sulphurets and phosphurets. It combines also with the acids, and forms with them neutral salts. Lime unites to certain metallic oxides, particularly those of mercury and lead; but the nature of these last compounds is not much known.

One of the great uses of lime is in the formation of mortar. In order to form mortar, the lime is slaked and mixed up with a quantity of sand, and the whole well wrought up into the consistence of paste with as little water as possible. This cement, properly interposed amongst the bricks or stones of buildings, gradually hardens and adheres to them so as to bind the whole together. This is partly, perhaps principally, owing to the regeneration of the carbonate of lime from the carbonic acid of the atmosphere. The best ingredients and their proportions to form mortar for different purposes, do not seem yet to be well understood.

2. *Magnesia.*

This earth is obtained from a salt now called *sulphate of magnesia*, which abounds in seawater and in some natural springs. According to the best analyses, crystallized sulphate of

magnesia consists of 56 parts of pure dry sulphate, and 44 parts water in the hundred. Some authors find more water in this salt; namely, from 48 to 53 per cent.; but Dr. Henry, in his analysis of British and foreign salt, in the Philos. Trans. 1810, takes notice of a crystallized sulphate of magnesia containing only 44 per cent. water; and the specimen of sulphate which I have had for many years bears the same character. I am, therefore, inclined to adopt this as the true proportion of water. Now, Dr. Henry found that 100 grains of the above sulphate of magnesia produced 111 or 112 grains of sulphate of barytes; and it is well established that $\frac{1}{3}$ of this last salt is acid; hence, the sulphuric acid in 100 sulphate of magnesia (56 real) is equal to 37 grains; consequently the magnesia is equal to 19 grains: but the weight of an atom of sulphuric acid is 34; therefore, $37 : 19 :: 34 : 17$, nearly, which must be the weight of an atom of magnesia, on the supposition that sulphate of magnesia is constituted of one atom of acid united to one of base, of which there is no reason to doubt. I have in the first part of this work, page 219, stated the weight of magnesia to be 20; it was deduced chiefly from Kirwan's analysis of sulphate of magnesia; but

from present experience I think it is too high. Though few of the salts of magnesia have been analyzed with great precision, yet the weight of the atom of magnesia derived from different analyses would not fall below 17, nor rise above 20. Dr. Henry and I analyzed the common carbonate of magnesia well dried in 100° , and found it to lose 40 per cent. by acids, and 57 per cent. by a moderate red heat. Hence it should consist of 43 magnesia, 40 carbonic acid, and 17 water. We found the carbonate begin to give out water and some acid about 450° ; but it supported a heat of 550° for an hour without losing more than 16 per cent. Hence the carbonate must be constituted of 1 atom of acid, 1 of magnesia, and 1 of water, stating the magnesia at 20; for, $19 + 8 + 20 = 47$; and if $47 : 19, 8, \text{ and } 20 :: 100 : 40, 17 \text{ and } 43$ respectively, according to the above experiments. I have reason to think, however, that the weight of the atom of magnesia ought rather to be deduced from the sulphate than the carbonate; because it is probable that this last always contains a small portion of sulphate of lime, when prepared by the medium of common spring water; this portion will be found in the result of the analysis by fire, and will be placed to the account of magnesia.

Wherefore I conclude the weight of an atom of magnesia to be 17. It is said that a supercarbonate of magnesia is obtainable ; but when sulphate of magnesia and supercarbonate of soda in solution are mixed together, there is a great effervescence and disengagement of carbonic acid, and nothing but the common carbonate of magnesia is precipitated according to my experience. Dr. Henry, indeed, obtained a crystallization by exposing a dilute mixture for some time ; the crystals were small opake globules, about the size of small shot ; but upon examination, they proved to be nothing but carbonate of magnesia united to 3 atoms of water instead of 1 atom. For, 100 grains lost 70 by a red heat, and 30 by acids ; whence its constitution was 30 acid + 30 earth + 40 water, or 19 acid + 19 earth + 24 or 25 water. The constitution of crystallized sulphate of magnesia must, therefore, be 1 atom of acid + 1 atom of magnesia + 5 atoms of water ; in weight $34 + 17 + 40 = 91$; this gives per cent. 37 acid + 19 base + 44 water, agreeably to Dr. Henry's experience above-mentioned.

The constitution of the most common salts of magnesia, in their dry state will, therefore, be as under :

	Acid.	Base.	
Carbonate of magnesia	53	+ 47	per cent. as 19 : 17
Sulphate ———	66.7	+ 33.3	34 : 17
Nitrate ———	69	+ 31	38 : 17
Muriate ———	56.4	+ 43.6	22 : 17

The nitrate of magnesia in the above table agrees with that of Kirwan, and Richter, and the muriate with that of Wenzel.

To obtain magnesia, the sulphate must be dissolved in water, and a quantity of pure potash in solution must be added ; the magnesia is then thrown down, and may be separated by filtration. Or if carbonate of potash be put into the solution of sulphate of magnesia, carbonate of magnesia will then be precipitated, which may be separated by filtration ; this last must be exposed to a red heat to drive off the carbonic acid ; the former need only to be dried in a gentle heat.

Magnesia is a white, soft powder, possessing little taste and no smell ; its specific gravity is said to be 2.3. It operates on vegetable colours like lime and the alkalies. It is infusible by heat, and very sparingly soluble in water. According to Kirwan, it requires 7000 times its weight of water to dissolve it ; I found it require 16,000 times its weight of water in one experiment. When exposed to the air,

magnesia, like lime, attracts 1 atom of water to 1 of magnesia, amounting to about 47 per cent. by my experience ; it attracts carbonic acid but very slowly. It does not combine with any of the simple substances, except perhaps hydrogen and sulphur. With the acids it forms neutral salts, which are found frequently to combine with other salts.

As the sulphate of magnesia is the ordinary combination of this earth exhibited as a soluble salt, it may be of use to have a table shewing the quantity of real dry sulphate, and of ordinary crystallized sulphate, in given weights or measures of solutions of different specific gravities. The table is founded on my own experience.

Table of sulphate of magnesia.

Atoms. Mag. Water.	Dry sulphate of magnesia per cent. by weight.	Dry sulphate of magnesia per cent. by measure.	Common crystal- lized sulphate of mag. per cent. by measure.	Specific gravity.
1 + 0	100			
1 + 5	56	93	166	1.66 sol.
1 + 8	44.4	66.6	119	1.50 liq
1 + 10	39	55.4	99	1.42
1 + 15	30	39	69.6	1.30
		31	55	1.25
		24	42.8	1.20
		18	32.1	1.15
		12	21.4	1.10
		6	10.7	1.05

The fifth hydrate is the ordinary crystallized sulphate ; the eighth is the strongest liquid so-

lution obtained by boiling ; and the fifteenth is a saturated solution at 60°.

3. *Barytes.*

The earth now denominated *barytes*, was discovered by Scheele in 1774. Since then the labour and experience of several distinguished chemists have added much to the knowledge both of the earth and its compounds ; so that now it may perhaps be said to be the best understood of all the earths. It occurs most frequently in combination with sulphuric acid, the compound being called *sulphate of barytes*, formerly *ponderous spar*, and is found about mines, particularly of copper. It also occurs in combination with carbonic acid, though rarely ; the compound is denominated *carbonate of barytes*.

Barytes may be obtained either from the sulphate or the carbonate. The former must be pulverized, mixed with charcoal, and exposed in a crucible to a red heat for some hours ; the sulphate is thus changed into a sulphuret. This sulphuret is to be treated with nitric acid, when the sulphur is thrown down, and the barytes combines with the acid ; the acid may then be driven off by a red heat. and barytes will remain in the crucible. If the carbonate

be used, it must be pulverized, mixed with charcoal, and exposed for some time in a crucible to the heat of a smith's forge. Boiling water will then dissolve the pure barytes, leaving the charcoal and carbonate, and upon cooling, crystals of hydrate of barytes are obtained. The greatest part of the water may be driven off by heat.

Pure barytes obtained by the former method is a greyish white body, easily reduced to powder. It has a harsh and caustic taste, and if swallowed proves poisonous. Like lime, when exposed to the atmosphere, it absorbs water, and then parts with it for carbonic acid. It changes certain vegetable blues to green. Its specific gravity is nearly 4. Barytes forms various combinations with water, called *hydrates*, which will presently be mentioned. It combines with sulphur and phosphorus, but not with the other simple substance. The sulphuret and phosphuret will be considered under their respective heads. The weight of the ultimate particle of barytes can be very nearly approximated, and appears to be 68, or twice the weight of an atom of sulphuric acid. This appears from the following statement of the proportions of the most common barytic salts, which have been successfully investigated.

	Acid.	Base.	
Carbonate of barytes	22	+ 78	per cent. as 19 : 68
Sulphate ———	33.3	+ 66.7	—— ——— 34 : 68
Nitrate ———	36	+ 64	—— ——— 38 : 68
Muriate ———	24.4	+ 75.6	—— ——— 22 : 68

The following respectable authorities agree in assigning 22 per cent. acid to carbonate of barytes ; namely, Pelletier, Clement, Desormes, Klaproth, and Kirwan ; and more recently Mr. Aikin finds 21.67, and Mr. James Thomson, 21.75 (Nicholson's Journal, vol. 22 and 23, 1809). The last mentioned chemist finds sulphate of barytes to be 33 acid, and 67 barytes. His conclusion corroborates the previous ones of Withering, Black, Klaproth, Kirwan, Bucholz, and Berthier, who all fix the acid at or near 33 per cent. Vauquelin, Rose, Berthollet and Thenard. and Clement and Desormes find 32 or more acid ; and Fourcroy and Aikin, 34. It is very satisfactory to see the near coincidence in regard to the constitution of this salt ; because it is frequently made a test of the quantity of sulphuric acid and of sulphur. Mr. J. Thomson finds 59.3 barytes per cent. in nitrate of barytes, Clement and Desormes 60, Kirwan 58 and 55 at different trials, and Fourcroy and Vauquelin 50. These results differ considerably from each other, and are all below the proportion as—

signed above ; but it must be observed that crystallized nitrate of barytes contains water, and perhaps various quantities of water according to the temperature in which it crystallizes ; now, if the atom of nitrate be associated with 1 atom of water, then the proportion of barytes per cent. will be 59.6, which nearly agrees with Thomson, and Clement and Desormes ; if with 2 atoms of water, the barytes will be 55.7 per cent. ; if with 3 atoms, then 52.3, &c.—Crystallized muriate of barytes appears clearly to consist of an atom of dry muriate + 2 atoms of water ; or 22 acid + 68 barytes + 16 water ; this reduced gives 20.8 acid + 64.1 barytes + 15.1 water per cent.—For, Kirwan finds 20 acid + 64 base + 16 water ; Fourcroy, 24 acid + 60 base + 16 water ; and Aikin, 22.9 acid + 62.5 base + 14.6 water per cent., which agree with each other, and with the theory as nearly as can be expected.

Barytes combines with most acids, and forms with them neutral salts. In many respects it appears to be related to the fixed alkalies, only in weight it is nearly the same as both of them put together.

Hydrate of Barytes.

When pure barytes, obtained from the nitrate by heat, is exposed to the air, or is moistened by water, it combines with it, and that in various degrees, forming a number of *hydrates*, which have not been sufficiently attended to and discriminated; much heat is evolved during the combination: it was mistaking the first hydrate of barytes for pure barytes that caused the uncertainty for some time in regard to the proportions of the elements of sulphate of barytes (see page 474). Now, if an atom of barytes weigh 68, the first hydrate will weigh 76, to which if 34 sulphuric acid be added, we shall have an atom of sulphate of barytes = 102, (for the water is driven off by the union of the acid and base); if then we conceived the hydrate to be pure barytes, we should conclude that 76 barytes united to 26 sulphuric acid to form 102 sulphate, which is very near the former mistaken conclusion of Thenard and Berthollet. Hence, then, there is reason to conclude that their barytes, kept some time in a red heat, was in reality the first hydrate, or one atom of barytes and one of water. When pure barytes is dissolved in boiling water, a solution is formed of specific gravity

exceeding 1.2; on cooling, great part of it crystallizes; these crystals are the *twentieth* hydrate, or consist of 1 atom of barytes and 20 of water, or 30 barytes and 70 water per cent.; if they are exposed to a heat about 400° or 500° , they melt, great part of the water is dissipated, and a dry white powder is obtained, which is the *fifth* hydrate. In this operation, 228 parts ($= 68 + 20 \times 8$) are reduced to 108 ($= 68 + 5 \times 8$), or 100 to 47, which is exactly the reduction obtained experimentally by Dr. Hope. This dry powder melts below a red heat; but I have not been able to find what it would be reduced to by exposure to a red heat, because it acquires carbonic acid, even in a crucible, as Berthollet has observed, almost as fast as it loses water. My experience on the crystals of barytes has been limited; but from the following I conclude they are the *twentieth* hydrate. I took 80 grains of fresh crystallized barytes, and dissolved them in 1000 grains of water; the solution was of the specific gravity 1.024; this solution took 70 grain measures of test sulphuric acid to saturate it, and afforded 36 grains of dried sulphate of barytes: of this 12 grains were acid and 24 barytes. Whence we learn, 1st, that 80 grains of crystals are equal to 24 real barytes, or 228 equal to 68; but $228 = 20 \times 8 + 68$, which shews that 20 atoms of

water are united to 1 of barytes; 2d, that the decimals in the second and third places of the expression for the specific gravity, denote the quantity of real barytes in 1000 grain measures of the solution. This last must evidently hold without any material error in all the inferior solutions; and hence the strength and value of barytic water may be known by its specific gravity, an advantage which does not practically appertain to lime-water. By subsequent trials, however, I found the quantity of barytes rather overrated.

The following sketch of a table of the hydrate of barytes may have its use, till a more ample and correct one can be constructed.

Table of the Hydrate of Barytes.

Atoms.	Barytes per cent. by weight.	Barytes per cent. by measurc.	Specific gravity.	Congeeing point.
Baryt. Water.				
1 + 0	100	400?	4.00? sol.	unknown.
1 + 1	90	—	—	—
1 + 5	63	—	—	—
1 + 20	30	48	1.6 —	200°?
1 + 36	19	25	1.3 fl.	150°?
1 + 27.5	2.6	2.7	1.03 —*	40°?
	1.8	1.8	1.02 —	—
	0.9	0.9	1.01 —	—

4. *Strontites.*

The mineral from which this earth is obtained was first found in the lead-mine of Strontian in Argyleshire, Scotland. The earth and

* This is a saturated solution in the mean temperature of 60°.

its distinguishing properties, were pointed out by Dr. Hope in an essay read to the Royal Society of Edinburgh, in 1792, and published in their Transactions, 1794. Several distinguished chemists have since confirmed and extended these investigations. The Scotch mineral is a *carbonate* of strontites; but the earth has since been found in various parts combined with sulphuric acid.

Strontites is obtained from the sulphate or carbonate of strontites, by the same processes as barytes from the like compounds; indeed, it bears so close a resemblance to barytes, both in its free and combined state, as to have been confounded with it. Strontites has much the same acrid taste as barytes; but it is not poisonous; it is less soluble in water than barytes; it has the property of giving a red or purple colour to flame, for which purpose the nitrate or muriate may be dissolved in alcohol, or applied to the wick of a candle. The weight of the atom of strontites is deducible from the salts which it forms with the more common acids to be 46. Thus,

	Acid.		Base.	
Carbonate of strontites	29.2	+	70.8	per cent. as 19 : 46
Sulphate	42.5	+	57.5	34 : 46
Nitrate	45.2	+	54.8	38 : 46
Muriate	32.4	+	67.6	22 : 46

Dr. Hope, Pelletier, and Klaproth find 30 per cent. of acid in the carbonate. Klaproth, Clayfield, Henry, and Kirwan find 42 per cent. acid in the sulphate. Kirwan finds the crystallized nitrate to contain 31.07 acid, 36.21 base, and 32.72 water; which I presume denotes 1 atom of acid, 1 of base, and 5 of water; that is, 38 acid + 46 base + 40 water; this reduced, would give 30.6 acid, 37.1 base, and 32.3 water per cent. which very nearly agrees with his experience. Taking the dry salt, his results would give 46.2 acid, and 53.8 base. Vauquelin finds the nitrate to contain 48.4 acid, 47.6 base, and 4 water; but this constitution cannot be correct: Neither can Richter's analysis, which gives 51.4 acid and water, and 48.6 base.—Dry muriate of strontites, according to Kirwan, consists of 31 acid, and 69 base; but Vauquelin states 39 acid, and 61 base; the former, without doubt, is nearer the truth.

Hydrate of Strontites. When water is put to pure strontites, it becomes hot and swells, like lime and barytes, and falls into dry powder. This powder seems to be the first hydrate; whence, 46 parts of strontites will take 8 of water to form this combination; but if more water be added, the hydrate crystallizes. These crystals appear to be the 12th hydrate;

that is, they are constituted of 1 atom of strontites and 12 of water = $46 + 96 = 142$, or 32 strontites + 68 water per cent. agreeably to the experience of Dr. Hope. Water dissolves about $\frac{1}{160}$ th of its weight of pure strontites in the temperature of 60° , or $\frac{1}{30}$ th of its weight of the crystals; the specific gravity of the solution is nearly 1.008. But boiling water dissolves about half its weight of the crystals. Whence it appears that strontites is much less soluble than barytes, and much more soluble than lime. The specific gravity of the crystals of strontites is rightly determined by Hassenfratz to be nearly 1.46. Strontian water may be used for the same purposes as lime-water, or barytic water.

Strontites combines with most of the acids to form neutral salts. It also combines with sulphur and phosphorus.

5. *Alumine, or Argil.*

The earth denominated alumine, constitutes a great portion of common *clay*; but this last is a mixture of two or more earths with iron, &c., and therefore cannot be exhibited as pure alumine. The earth may be obtained pure from a common well known salt, called *alum*,

which is constituted of sulphate of potash and sulphate of alumine combined together, with a portion of water. A quantity of alum is to be dissolved in 10 times its weight of water ; to this a quantity of liquid ammonia is to be added ; the sulphuric acid seizes the ammonia, and lets fall the alumine, which may be separated from the liquid by filtration ; and then exposed to a red heat.

Alumine thus obtained is a fine white earth, spongy, and adhesive when moistened ; it has neither taste nor smell ; it is said to have the specific gravity, 2. When mixed with water, it forms a mass which is the basis of earthen ware, and capable of receiving any figure. In this case, by the application of great heat, it becomes excessively hard, and loses in part, or wholly, its adhesive quality. Pure alumine bears the highest heat of a furnace without undergoing any change.

Alumine does not form any known combination with oxygen, hydrogen, charcoal, sulphur, or phosphorus ; but it combines with the alkalies, with most of the earths, and with several metallic oxides. It combines too with many of the acids, but forms in most cases uncrystallizable salts. It possesses a strong affinity for vegetable colouring matter, and hence its great importance in the arts of dyeing and

printing, in which it is employed to fix the colour on the cloth.

The weight of an atom of alumine is not so easily determined as that of the preceding earths and alkalies; partly because the salts which it forms with the acids are not crystallizable, and partly because they have not had a proportionate share of attention paid to them. The only salt with alumine which has been carefully analyzed is the triple compound, or alum; an acquaintance with the constitution and properties of this salt is of great importance to its manufacturer, and to the various artists to whom it is of indispensable utility.

The experience of Chaptal, Vauquelin, and of Thenard and Roard (*An. de Chimie*, vol. 22, 50, and 59, or *Nicholson's Journal*, vol. 18) shews that the alum of all countries is very nearly the same in its constitution and qualities, that it contains 33 per cent. sulphuric acid, 11 or 12 alumine, 8 or 9 potash, and 47 water. All the authors I have mentioned do not agree, it is true, in these numbers; but the differences are more in appearance than reality. Vauquelin obtains 95 sulphate of barytes from 100 alum, but Thenard and Roard obtain 100. The last mentioned chemists adopt only 26 per cent. acid in sulphate of barytes; whereas it is now universally allowed there are about

33 per cent. acid in that salt. Mr. James Thomson, I am informed, finds nearly 100 per cent. sulphate of barytes. This result I adopt as the most correct, and it is also the most recent. Vauquelin finds $48\frac{1}{2}$ water in alum; this is more than is generally found, and accounts in some degree for his obtaining less sulphate of barytes. Chaptal finds 47 per cent. water in English alum, with which my experience accords. Vauquelin finds 10.5 alumine, Thenard and Roard, 12.5 per cent. Mr. Tennant of Glasgow, who favoured me with an analysis, finds 11.2 alumine in the alum manufactured there. This last chemist finds 15 per cent. sulphate of potash, which is the same as Thenard and Roard's nearly, 15.7. Now, as 34 acid + 42 potash, have been shewn to constitute 76 sulphate, 15 must contain 6.7 acid and 8.3 potash. Collecting these results then, it appears that alum may be said to consist of,

33 sulphuric acid.

11.7 alumine.

8.3 potash.

47 water.

100

Of the 33 sulphuric acid, it must be recollected that 6.7 parts belong to the potash; that is, $\frac{1}{5}$ th of the whole; the remainder, or $\frac{4}{5}$ ths, belong to the alumine. Hence, then, were there only 5 atoms of sulphuric acid in a molecule of alum, 1 atom would appertain to an atom of potash, and the other 4 atoms to as many of alumine, provided the acid and alumine unite one to one, which we are to presume till sufficient reason appear to the contrary. It should seem, then, that an atom of alum is constituted of one of sulphate of potash in the centre, and 4 atoms of sulphate of alumine around it, forming a square. But $33 - 6.7 = 26.3$ acid to 11.7 alumine; and $26.3 : 11.7 :: 34 : 15$, the weight of an atom of alumine. Dry alum must, therefore, be $5 \times 34 + 42 + 4 \times 15 = 272$; but as this is found combined with water in the state of common alum, it will be satisfactory to know how many atoms of water are attached to one atom of dry alum. for this purpose, we have $53 : 47 :: 272 : 241 =$ the weight of water; this, divided by 8, gives the number of atoms $= 30$. Hence, an atom of common alum consists of,

1 atom of sulphate of potash	=	76	=	per cent.	15
4 atoms of sulphate of alumine	=	196	———		38
And 30 atoms of water.	=	240	———		47
		<hr/>			<hr/>
		512			100

A saturated solution of alum in water, at the temperature 60° , is of the specific gravity 1.048, and is constituted of 1 atom of dry alum and 600 of water ; or the alum has 20 times the quantity of water that the crystals contain. The specific gravity of alum itself is about 1.71 ; and by means of heat, solutions of it in water may be obtained of any inferior specific gravity ; at least, I have had a solution, which, when hot, was 1.57.

Alumine does not combine with carbonic acid ; but it combines with the nitric and muriatic acids ; it would, therefore, be desirable that the weight of an atom of alumine should be investigated from these last combinations, as well as from the sulphate. No author that I know has given the proportion of elements in nitrate of alumine ; and in muriate of alumine Bucholz determines equal parts of acid and base, and Wenzel 28 acid to 72 base ; so that no confidence can be placed in them. I determined the proportions of these salts as follows : 100 grains of alum were dissolved in water ; the alumine was precipitated by 156 measures, more or less, of test ammonia, (.97), care being taken that the aluminous solution was saturated with ammonia, and that none was superabundant ; the liquid was then well agitated, and immediately divided into three

equal portions. It was then found that each of these portions took 52 measures of the test acids; namely, the sulphuric, the nitric, and the muriatic respectively, to dissolve the floating alumine, and to clear the solutions which were afterwards found to be free from uncombined acids. Hence, the proportions of the salts are deduced as under :

	Acid.	Base.	
Sulphate of alumine	69.4	+ 30.6	per cent. as 34 : 15
Nitrate ———	71.7	+ 28.3	—— ——— 38 : 15
Muriate ———	59.5	+ 40.5	—— ——— 22 : 15

It will be proper here to notice an opinion which Vauquelin supported in his essay in 1797, but which is not adverted to in his succeeding essay in 1804, nor in the one of Thénard and Roard in 1806: I mean the opinion that alum consists of the *supersulphate* of alumine and sulphate of potash. If this be true, then the atom of alumine must weigh 30, because 2 atoms of sulphuric acid unite to 1 of alumine. The opinion appears to me without support. When a solution of alum is put to the blue test, it changes it to red; but this is not a proof of excess of acid where the base of the salt has a strong affinity for colouring matter; there is probably a true decomposition of the salt, or perhaps the colouring matter forms

a triple compound with the salt. That no uncombined acid accompanies alum is certain, because the least portion of alkali decomposes it. Besides, a red heat drives off half of the acid at least from supersalts ; but alum bears a red heat without losing a sensible portion of acid. From the experiment related above, it appears that the sulphuric, the nitric, and the muriatic acid tests are of equal efficacy in saturating alumine. Are these all supersalts ? If so, why does not half the acid in each case neutralize the earth, and form a simple salt ?— But it is said if alumine be boiled in a solution of alum, the alumine combines with the alum, and falls down an insoluble, neutral salt. Vauquelin asserts he has made the experiment ; but he mentions no proportions, nor does he point out the time requisite to produce the effect. With a view to this subject, I precipitated the alumine from a measure of saturated solution of alum at 60° (about 100 grains of alum) by the necessary quantity of ammonia ; to this liquid, which was found neutral, still containing the alumine in suspension, I put another measure of the same solution of alum, and boiled the whole for 10 minutes in a glass vessel ; it was then set aside to cool, and filtered ; the liquid was not much diminished in specific gravity, and required nearly the same

quantity of ammonia to saturate it, and afforded the same quantity of alumine as the first measure. Apprehending the sulphate of ammonia present might influence the result, I next put the dry pulverized alumine from 100 grains of alum into a solution of 100 grains of alum in water, and in another experiment the moist recently filtered alumine, and boiled the whole for 10 minutes; the water evaporated was restored, and the liquor filtered; it was of the same specific gravity as at first, tasted equally aluminous, and the precipitate collected and dried, weighed just the same as before. These facts lead me to doubt concerning the existence of this *alum saturated with its earth*, as the earlier chemists called it. But supposing the existence of a combination of sulphuric acid with twice the quantity of alumine, I know no reason why it should not be constituted of 1 atom of acid and 2 of alumine. Hence, I conclude the weight of an atom of alumine above stated is a fair deduction.

The French chemists seem to have proved that the presence of even a very small portion of sulphate of iron in alum is very injurious in some of its uses in dyeing, &c.

Hydrate of Alumine. Saussure, in the 52d vol. of the Journal de Physique, observes, that alumine is precipitated from its solution, in

two very different states, according to circumstances ; the one he calls *spongy*, and the other *gelatinous* alumine ; they both retain 58 parts per cent. of water, when dried in common summer heat ; the former parts with the whole of its water at a red heat ; but the latter only loses 48 per cent. at the highest temperature. There may be some doubt as to the accuracy of these facts ; but it would seem probable that alumine, at the ordinary temperature, retains 2 atoms of water, or 15 parts alumine hold 16 of water ; this would allow 52 per cent. loss by a red heat. The subject deserves further attention.

6. *Silex*.

The earth denominated *silex*, is found abundantly in a great many stones ; it is almost pure in *flint*, *rock crystal*, and others ; but of stones in general it only constitutes a part, being found in combination with one or more of the other earths, or with metals, &c. It is also found in small particles in the form of white sand. The most distinguishing feature of this earth is its melting along with either of the fixed alkalies, and forming with them that beautiful and well known compound, glass. The specific gravity of flint and rock crystal is usually about 2.65. After being heated red

not for some time, flint may be pulverized in an iron mortar, and forms a white earth, which may be regarded as silix sufficiently pure for most purposes. It forms a harsh, gritty powder, which does not cohere nor form a paste with water like clay. It is insoluble in water in any sensible degree. It is infusible by heat, unless at an extremely high degree. To obtain silix in a pure state, a mixture of sulphuric acid and fluato of lime must be distilled in glass vessels, or along with pulverized flint, when superfluato of silix is produced in an elastic state ; the gas may be received over water, on the surface of which a crust of fluato of silix is formed ; this crust being removed by filtration or otherwise, the clear liquor is to be saturated with ammonia, when pure silix is thrown down. When dried in a red heat, it forms a fine white powder. The common mode prescribed to obtain pure silix gives pure glass, as will presently be explained. It is remarkable, that sulphuric acid, poured on fluato of silix, expels the fluoric acid in fumes, though it does not combine with the silix.

Silix combines with the two fixed alkalies, with most of the earths, and with metallic oxides ; but with few of the acids immediately, except the fluoric ; when joined to an alkali, it may be united to several of the acids,

forming triple salts. It seems not to combine with oxygen, hydrogen, or the other combustibles, nor with ammonia.

The fixed alkalies may each be combined with silex in two proportions. In order to form glass, one part of silex and one of fine dry carbonate of soda may be mixed together; but if potash is used, then $1\frac{1}{2}$ parts will be required. If the other or soluble compound is wanted, then double the quantities of alkali must be used, or 2 parts of soda and 3 of potash. A strong red heat in each case is necessary to form a complete union of the principles; the fused mass gives out the carbonic acid of the alkalies, and when poured out immediately becomes glass; but when the double quantity of alkali is used, the glass is deliquescent, and may be completely dissolved in water. This last may be called *supersodiuretted* or *superpotasiuretted silex*, and the former *sodiuretted* or *potasiuretted silex*. When an acid is dropped into a solution of superpotasiuretted silex, a white precipitate is immediately formed, which is potasiuretted silex, or common glass, and not silex, as has hitherto been supposed. For, 1. The heated precipitate, I find, weighs about $\frac{2}{3}$ ds of the red hot potasiuretted silex, whereas the silex is only about $\frac{1}{3}$ d of the compound; 2. the acid requisite to throw down the preci-

piate, is only half of that which the alkali in the compound would require for its saturation ; 3. the precipitate, dried in a moderate red heat, is fusible into glass by the blow-pipe ; and, 4. as the acids do not take the alkali from glass, they ought not to take more alkali from superpotasiuretted silex than what would reduce it to common glass.

It is more difficult to find the weight of an atom of silex than that of any other of the previous earths, because it enters into combination with only one of the acids, and the proportions have not yet been ascertained. I have, however, succeeded pretty well by investigating its relations with potash, lime, and barytes. Having obtained a quantity of superpotasiuretted silex without any excess of alkali ; that is, which afforded a precipitate with the least portion of acid (for if the alkali be in excess, acid may be added without any precipitation), I precipitated a given weight of the dried compound previously in water, by sulphuric acid in excess ; the precipitate was heavy and bulky ; after remaining on the filter for some time, it resembled a mass of over-boiled potatoe ; the water being forced out by pressure, a white substance remained, which easily left the filter, and when dried in a low red heat, left a harsh gritty powder, nearly $\frac{2}{3}$ ds of the weight of the

compound. Again, test sulphuric acid was slowly added to the solution, of a given weight of the dry compound in water ; as soon as the mixture manifested acid to the test liquid, it was considered as saturated. The whole acid added was found to be sufficient to saturate a weight of pure alkali nearly equal to $\frac{1}{3}$ d of that of the dry compound. These experiments rendered it obvious that only one half of the alkali was engaged by the acid, the other half remaining with the silex ; and the conversion of the precipitate into glass by the blow-pipe confirmed the conclusion. It remained, then, to determine which of the two combinations of alkali and silex was the most simple. As a part of the alkali is easily drawn from one compound, and difficultly from the other, the former must be supposed two atoms of alkali to one of silex, and the latter one to one. From this it should seem, that the weight of an atom of silex is nearly the same as that of an atom of potash ; and the near agreement of the specific gravities of these two bodies, is an argument in favour of the conclusion.

Superpotasiuretted silex exhibited remarkable results with lime and barytes. One hundred measures of the solution, containing 18 grains dry, were saturated with 5000 grains of lime water, containing 6 grains of lime ; the

precipitate, filtered and dried in a low red heat, was 19 grains. The residuary liquid required 27 grains of test muriatic acid to saturate it ; whereas, the like quantity of lime water took 54 grains. Here, then, it appears that each atom of the superpotasiuretted silex must have been decomposed into one atom of potash, which remained in the liquid, and one atom of potasiuretted silex, which united to two atoms of lime, and the compound was precipitated. That the matter in the liquid was potash, and not lime, was proved by carbonic acid ; and the test muriatic acid shewed that every atom of potash in the liquid took the place of two atoms of lime. The case was different with barytes. One hundred measures of the solution, containing 18 grains dry, were saturated with 850 measures of 1.0115 barytic water, containing 9 dry barytes. The residuary liquid took 28 test acid to saturate it, and the precipitate dried in a red heat was 20 grains. Here it is evident that one atom of barytes had detached one of potash from the compound, and taken its place ; consequently, the residue of liquid required the same quantity of acid as the barytic water, and the precipitate was a triple compound of silex, potash, and barytes ; one atom of each, consisting

probably of 9 parts of barytes, $5\frac{1}{2}$ silex, and $5\frac{1}{2}$ potash.

Upon the whole, I am inclined to believe that one atom of silex weighs nearly 45 times that of hydrogen.

Silex combines with alumine by heat, and the compound forms hard infusible bodies, such as porcelain, earthen ware, bricks, &c.

7. *Yttria*.

This earth is found at Ytterby, in Sweden. It constitutes a portion of the mineral called *gadolinite*, first analyzed by Gadolin, and of that called *yttrotantalite*, both found in the same mine. The earth may be obtained by dissolving the pulverized mineral in a mixture of nitric and muriatic acids ; the liquor poured off is then evaporated to dryness, the residuum dissolved in water. If ammonia be now added, the earth is precipitated. It is obtained in the form of a white powder, said to be of the specific gravity 4.34. It is infusible by heat, and insoluble in water : but it forms salts with several of the acids ; and these salts have mostly a sweet taste, and are in some instances coloured. They resemble the metallic salts in many particulars. According to Klaproth, the

hydrate of yttria, a dry powder, contains 31 per cent. water; this would imply that the atom of yttria weighs 18, 36, or 53, according as it is the first, second, or third hydrate; but he finds the carbonate of yttria to be 18 acid, 55 yttria, and 27 water: now, supposing the carbonate to be 1 atom of acid, 1 of earth, and 3 of water, and that the acid and water weigh 45, then the atom of earth is deduced to be 53; and this conclusion agrees with the preceding one, which supposes the hydrate to be the third. The great specific gravity of the earth countenances the notion of the atom being heavy; but we cannot rely upon the above determination till it is supported by more various experiments.

8. *Glucine*.

The earth called *glucine* (from the sweet-tasted salts which it forms with acids) is obtained chiefly from two minerals, the beryl and the emerald. These minerals are constituted of silex, alumine, and glucine; the two former being abstracted by the usual processes, there remains the glucine, a soft white powder, adhering to the tongue, but without taste or smell, and infusible by heat. Its specific gravity is said to be 2.97. It is insoluble in wa-

ter. This earth combines with the acids, with liquid fixed alkalies, and with liquid carbonate of ammonia. In the last case it resembles yttria, but is much more soluble than that earth in carbonate of ammonia. Glucine has considerable resemblance in its properties both to alumine and yttria.

We have not data sufficient to find the weight of an atom of glucine; but from the experiments of Vauquelin on the carbonate of glucine (Annal. de Chimie, tom. 26, pages 160 and 172) it should seem to weigh nearly 30, or twice the weight of alumine. It is remarkable, too, that the analysis of the beryl, and of the emerald, give nearly the same quantity of alumine and glucine, which indicates that the weight of an atom of the latter is either equal to that of the former, or some multiple of it.

9. *Zircone.*

The *zircon* or *jargon*, and the *hyacinth*, are two precious stones found chiefly in Ceylon. These contain a peculiar earth which has received the name of zircone. It may be obtained thus: Let one part of zircon in powder, be fused with 6 parts of potash; then let the mass be diffused through a portion of water,

which will dissolve the potash and its combinations, and leave a residuum. This residuum must be dissolved in muriatic acid, and potash must be added, which will precipitate the zircon. It is a fine white powder, insipid, and somewhat harsh to the feel. When violently heated, it is converted into a kind of porcelain, very hard, and of the specific gravity 4.35. Zircon is not soluble in water, but it retains $\frac{3}{4}$ or $\frac{1}{4}$ of its weight of water when dried in the air, and assumes the appearance of gum arabic. Zircon is not soluble in liquid alkalies, but it is in the alkaline carbonates; it adheres to several of the metallic oxides. Zircon unites with acids, and forms with them salts, many of which are insoluble in water, but others are very soluble. They have an astringent taste, resembling some of the metallic salts.

As the salts of zircon have not yet been formed with sufficient care to ascertain the ratio of their constituent principles, we can not exactly determine the weight of an atom of this earth. Vauquelin finds 44 carbonic acid and water and 56 zircon in carbonate of zircon; but, unfortunately, he has not given the acid separately from the water. Allowing the accuracy of the above, and supposing the carbonate to contain 1 atom of water, the weight of an atom of zircon will be 34; but if we

suppose 2 atoms of water, then the atom of earth comes out 45. This last I judge to be nearest the truth. It is remarkable, that the hyacinth contains 32 parts of silex and 64 of zircon, which, according to the above conclusion, corresponds to 1 atom of silex and 2 of zircon, a constitution by no means improbable. Upon this principle, the gummy hydrate above mentioned, may be 2 atoms of water and 1 of zircon, or 16 water + 45 zircon.

END OF PART SECOND.

EXPLANATION OF PLATES.

PLATE 5. Exhibits the various symbols devised to represent the simple and compound elements; they are nearly the same as in plate 4, only extended and corrected: they will be found to agree with the results obtained in the preceding pages.

Fig.	Simple.	Wt.	Fig.	Wt.
1.	Oxygen	7	12.	Iron 50
2.	Hydrogen	1	13.	Nickel 25 ? 50 ?
3.	Azote	5	14.	Tin 50
4.	Carbone	5.4	15.	Lead 95
5.	Sulphur	13	16.	Zinc 56
6.	Phosphorus	9	17.	Bismuth 68 ?
7.	Gold	140 ?	18.	Antimony 40
8.	Platina	100 ?	19.	Arsenic 42 ?
9.	Silver	100	20.	Cobalt 55 ?
10.	Mercury	167	21.	Manganese 40 ?
11.	Copper	56	22.	Uranium 60 ?

Fig.	Wt.	Fig.	Wt.
23. Tungsten	56 ?	41. Nitrous gas	12
24. Titanium	40 ?	42. Nitrous oxide	17
25. Cerium	45 ?	43. Nitric acid	19
26. Potash	42	44. Oxynitric acid	26
27. Soda	28	45. Nitrous acid	31
28. Lime	24	46. Carbonic oxide	12.4
29. Magnesia	17	47. Carbonic acid	19.4
30. Barytes	68	48. Sulphurous oxide	20
31. Strontites	46	49. Sulphurous acid	27
32. Alumine	15	50. Sulphuric acid	34
33. Silex	45	51. Phosphorous acid	32
34. Yttria	53	52. Phosphoric acid	23
35. Glucine	30	53. Ammonia	6
36. Zircon	45	54. Olefiant gas	6.4
Compound:		55. Carburetted hyd.	7.4
37. Water	8	56. Sulphuret. hydr.	14
38. Fluoric acid	15	57. Supersulph. hydr.	27
39. Muriatic acid	22	58. Phosphuret. hydr.	10
40. Oxymuriatic acid	29	59. Phosphur. sulph.	22
		60. Superphos. sulph.	31

PLATE 6. Symbols of compound elements (continued from Plate 5.)

Fig.	Wt.	Fig.	Wt.
1. Hydrate of potash	50	16. Muriate of barytes	90
2. Potassium, or hydruret of potash	43	17. Sulphate of alumine	49
3. Carbonate of potash	61	18. Nitrate of alumine	53
4. Hydrate of soda	36	19. Muriate of alumine	37
5. Sodium, or hydruret of soda	29	20. Alum	272
6. Carbonate of soda	47	21. Potasiuretted silix, or glass	37
7. Hydrate of lime	32	22. Superpotasiuretted silix	129
8. Carbonate of lime	43	23. Potash, silix, & lime	135
9. Sulphate of lime	58	24. Potash, silix, & barytes	155
10. Nitrate of lime	62	25. Fluete of silix	60
11. Muriate of lime	46	26. Subpotasiuretted * ammonia	54
12. Hydrate of barytes	76	27. Oxymuriate of olefiant gas	41
13. Carbonate of barytes	87		
14. Sulphate of barytes	102		
15. Nitrate of barytes	106		

* The olive coloured substance obtained by heating potassium in ammoniacal gas, by Gay Lussac and Thenard, Davy, &c.

PLATE 7. Fig. 1, 2, and 3. represent profile views of the disposition and arrangement of particles constituting elastic fluids, both simple and compound, but not mixed; it would be difficult to convey an adequate idea of the last case, agreeably to the principles maintained, page 190.—The principle may, however, be elucidated by the succeeding figures.

Fig. 4. is the representation of 4 particles of azote with their elastic atmospheres, marked by rays emanating from the solid central atom; these rays being exactly alike in all the 4 particles, can meet each other, and maintain an equilibrium.

Fig. 5. represents 2 atoms of hydrogen drawn in due proportion to those of azote, and coming in contact with them; it is obvious that the atoms of hydrogen can apply one to the other with facility, but can not apply to those of azote, by reason of the rays not meeting each other in like circumstances; hence, the cause of the intestine motion which takes place on the mixture of elastic fluids, till the exterior particles come to press on something solid.

PLATE 8. The first 16 figures represent the atoms of different elastic fluids, drawn in the centres of squares of different magnitude, so as to be proportionate to the diameters of the atoms as they have been herein determined. Fig. 1. is the largest; and they gradually decrease to fig. 16, which is the smallest; namely, as under,

Fig.	Fig.
1. Superfluat of silex	9. Oxymuriatic acid
2. Muriatic acid	10. Nitrous gas
3. Carbonic oxide	11. Sulphurous acid
4. Carbonic acid	12. Nitrous oxide
5. Sulphuretted hydrogen	13. Ammonia
6. Phosphuretted hydrogen	14. Olefiant gas
7. Hydrogen	15. Oxygen
8. Carburetted hydrogen	16. Azote.

Fig. 17. exhibits curve lines, by which the boiling point of liquid solutions of nitric and muriatic acid, and of ammonia, of any strength, may be determined. They are representations of the results contained in the preceding tables relative to these articles. If any point be taken in one of the curves, and a horizontal line be traced to the margin, the strength per cent. by weight of the liquid will be shewn; and if a perpendicular line be traced to the top the temperature at which the liquid of that strength boils in the open air will be found.

APPENDIX.



AS it is nearly two years since the printing of this second part commenced, it may be expected that in the rapid progress of chemical investigation, some addition has, in the interval, been made to the stock of facts and observations relating to the more early subjects herein discussed. The ground upon which I determine the weights of the ultimate particles of the metals, has not yet been entered upon. This will occupy a leading place in a second volume, when the metallic oxides and sulphurets come to be considered. It will be observed, that I have seen reason to change some of the metallic weights which were given in the first part ; and it is probable, that in our future investigations these may be again changed ; this will depend upon the precision with which the proportions of the elements of the metallic oxides, sulphurets and salts, shall be obtained. The identity of tantalium and columbium seems to have been ascertained by

Dr. Wollaston. Mr. Davy, and the French chemists Gay Lussac and Thenard, have furnished a number of facts and observations on various subjects, resulting from their application of the new metals, potasium and sodium, and Voltaic electricity, to chemical investigations. When the mind is ardently engaged in prosecuting experimental enquiries, of a new and extraordinary kind, it is not to be expected that new theoretic views can be examined in all their relations; and formed so as to be consistent with all the well known and established facts of chemistry; nor that the facts themselves can be ascertained with that precision which long experience, an acquaintance with the instruments, and the defects to which they are liable, and a comparison of like observations made by different persons, are calculated to produce. This may appear to be a sufficient apology for the differences observed in the results of the above celebrated chemists, and for the opposition, and sometimes extravagance, of their views.

All the phenomena of combustion are exhibited by heating potasium in fluorie acid gas (superfluat of silex); though this would seem to intimate that the gas contains oxygen, yet, as Mr. Davy properly observes, heat and light

are merely the results of the intense agency of combination. It is remarkable that hydrogen is given out, yet not so much as would be given by the action of potasium on water ; it is variable, and amounts generally to less than $\frac{1}{4}$ th of that quantity. Mr. Davy and the French chemists agree in the belief of a decomposition of the acid ; but it is doubtful whether the hydrogen is from the potasium or the acid. The fact, I have observed, page 286, of the diminution of a mixture of hydrogen and fluoric acid gas by electricity, is one of the strongest in favour of the notion that the acid gas contains oxygen.

Muriatic acid has been a great object of investigation. Mr. Davy's ideas on this subject, in his *Electrochemical Researches*, 1808, were, that the acid gas contains water in a combined state ; or, to use my own phraseology, that an atom of real muriatic acid combined with one of water, formed one of the acid gas ; hence, in burning potasium in the gas, the potasium decomposed the water, the hydrogen was liberated, and the oxygen joined to the potasium to form potash, with which the real or dry acid immediately united. This conclusion was plausible ; but it was truly astonishing to see the French chemists draw the same conclusion

from their views of the subject. They should have viewed muriatic acid gas as the pure acid, which combined with the potash of the potassium, and liberated its hydrogen. Mr. Davy has recently written an essay on the oxymuriatic and muriatic acids, with a copy of which he has just favoured me ; in this, he discards his former opinion of the gaseous combination of acid and water, and adopts another, that muriatic acid gas is a pure elastic fluid, resulting from the union of hydrogen with oxymuriatic acid, which last he conceives to be a simple substance. This notion agrees so far with mine, as to make hydrogen the base of muriatic acid ; but I cannot adopt his constitution of the acid. Mr. Davy now considers the hydrogen liberated, by the combustion of potassium in muriatic acid gas, as proceeding from the decomposed acid, and the new compound an *oxymuriate of potassium*. The explanation I prefer is, that the hydrogen proceeds from the potassium, and the undecomposed acid gas unites to the potash.

As to oxymuriatic acid, Gay Lussac and Thenard have reported some very striking and unexpected properties of it which they have discovered. They assert, that dry oxymuriatic acid gas was not decomposed by sulphurous

acid gas, nitrous oxide, carbonic oxide, nor even nitrous gas, when these were dry ; but that it was immediately decomposed by them if water was present. These *may* appear to them to be facts ; but certainly they are too important, and some of them too difficultly ascertained, to be believed merely upon the assertion of any one. By what means were they found ? What was the structure of the apparatus, the quantity of gases operated upon, the time they were allowed to be in contact, the means employed to investigate the results, &c. &c. ? To answer all these enquiries satisfactorily, would require a volume in detail ; yet, Gay Lussac and Thénard have not said one word. Now, we know that the facts respecting the mixtures of these gases over water, are *not* as above stated. Mr. Davy observes, (Researches, page 250) that “ oxygenated muriatic acid and nitrous oxide “ were mingled in a water apparatus ; there “ was a slight appearance of condensation ; “ but this was most probably owing to absorption by the water ; on agitation, the oxygenated muriatic acid was absorbed, and the “ greater part of the nitrous oxide remained un- “ altered.” I have repeatedly mixed carbonic oxide and nitrous gas with oxymuriatic acid in a water apparatus ; the former mixture ex-

hibits no signs of chemical union for several seconds ; afterwards, if the sun shine upon it, chemical action commences, and continues somewhat slower than that of oxygen and nitrous gas ; but if the mixture be put in the dark, it will remain for days, I believe, without any change. The latter mixture, or nitrous gas and oxymuriatic acid, in equal measures, over water, produces an instantaneous union, much more rapid than that of oxygen and nitrous gas, and which to all appearance seems independent upon the water. Now, if these simple experiments give such different results in different hands, what may we expect of the complex experiments, where the gases are previously dried, and then mixed in vessels quite free from mercury and water, and lastly examined after such mixture has taken place, regard being still had to the effects which mercury and water have, or are supposed to have, upon such mixtures ?

Mr. Davy has given several experiments to shew that oxymuriatic acid combines with hydrogen to produce muriatic acid ; but none of them appears to me decisive. When equal measures of hydrogen and oxymuriatic acid were introduced into an exhausted vessel, and fired by an electric spark, the result was a

slight vapour, and a condensation of $\frac{1}{10}$ to $\frac{1}{20}$ of the volume, the gas remaining being muriatic acid. This fact, if it can be relied upon, is favourable to the notion it is to support ; I should have expected a condensation of $\frac{1}{3}$ or $\frac{1}{4}$ of the total volume on the common hypothesis ; if the author had described the apparatus and quantity of gases submitted to the experiment, with the mode of determining the quantity and quality of the residual gas, it would have assisted in any future enquiry on the subject ; it is certainly an important experiment. Mr. Davy allows the hyperoxymuriate of potash to abound with oxygen. He supposes the oxygen to be attracted by the potasium, or the potash, rather than by the oxymuriatic acid. The facts appear to me to draw the other way much more powerfully. We find oxymuriatic acid in conjunction with much oxygen, in several other salts, but potash no where, except when joined to this acid.

Some observations on nitric acid, and the other compounds of azote and oxygen, have been made by Gay Lussac, in the 2d vol. of the *Memoires d'Arcueil*. He contends that one *measure* of oxygenous gas unites to two *measures* of nitrous gas to form nitric acid, and to three measures to form nitrous acid. Now

I have shewn, page 328, that 1 measure of oxygen may be combined with 1.3 of nitrous gas, or with 3.5, or with any intermediate quantity whatever, according to circumstances, which he seems to allow ; what, then, is the nature of the combinations below 2, and above 3, of nitrous gas ? No answer is given to this ; but the opinion is founded upon an hypothesis that all elastic fluids combine in equal measures, or in measures that have some simple relation one to another, as 1 to 2, 1 to 3, 2 to 3, &c. In fact, his notion of measures is analogous to mine of atoms ; and if it could be proved that all elastic fluids have the same number of atoms in the same volume, or numbers that are as 1, 2, 3, &c. the two hypotheses would be the same, except that mine is universal, and his applies only to elastic fluids. Gay Lussac could not but see (page 188, Part 1. of this work) that a similar hypothesis had been entertained by me, and abandoned as untenable ; however, as he has revived the notion, I shall make a few observations upon it, though I do not doubt but he will soon see its inadequacy.

Nitrous gas is, according to Gay Lussac, constituted of equal measures of azote and oxygen, which, when combined, occupy the same volume as when free. He quotes Davy, who

found 44.05 azote, and 55.95 oxygen by weight, in nitrous gas. He converts these into volumes, and finds them after the rate of 100 azote to 108.9 oxygen. There is, however, a mistake in this; if properly reduced, it gives 100 azote to 112 oxygen, taking the specific gravities according to Biot and Arago. But that Davy has overrated the oxygen 12 per cent. he shews by burning potassium in nitrous gas, when 100 measures afforded just 50 of azote. The degree of purity of the nitrous gas, and the particulars of the experiment, are not mentioned. This one result is to stand against the mean of three experiments of Davy, (see page 318) and may or may not be more correct, as hereafter shall appear. Dr. Henry's analysis of ammonia embraces that of nitrous gas also; he finds 100 measures of ammonia require 120 of nitrous gas for their saturation. Now this will apply to Gay Lussac's theory in a very direct manner; for, according to him, ammonia is formed of 1 measure of azote and 3 of hydrogen, condensed into a volume of 2; it follows, then, that 100 ammonia require 75 oxygen to saturate the hydrogen; hence, 120 nitrous gas should contain 75 oxygen, or 100 should contain 62.5, instead of 50. Here either the theory of Gay Lussac, or the expe-

rience of Dr. Henry, must give results wide of the truth. In regard to ammonia too, it may farther be added, that neither is the rate of azote to hydrogen 1 to 3, nor is the volume of ammonia doubled by decomposition, according to the experiments of Berthollet, Davy, and Henry, made with the most scrupulous attention to accuracy, to which may be added my own.—There is another point of view in which this theory of Gay Lussac is unfortunate, in regard to ammonia and nitrous gas; 1 measure of azote with 3 of hydrogen, forms 2 of ammonia; and 1 measure of azote with 1 of oxygen, forms 2 of nitrous gas: now, according to a well established principle in chemistry, 1 measure of oxygen ought to combine with 3 of hydrogen, or with one half as much, or twice as much; but no one of these combinations takes place. If Gay Lussac adopt my conclusions, namely, that 100 measures of azote require about 250 hydrogen to form ammonia (page 433), and that 100 azote require about 120 oxygen to form nitrous gas (page 331), he will perceive that the hydrogen of the former would unite to the oxygen of the latter, and form water, leaving no excess of either, further than the unavoidable errors of experiments might produce; and thus the great

chemical law would be preserved. The truth is, I believe, that gases do not unite in equal or exact measures in any one instance ; when they appear to do so, it is owing to the inaccuracy of our experiments. In no case, perhaps, is there a nearer approach to mathematical exactness, than in that of 1 measure of oxygen to 2 of hydrogen ; but here, the most exact experiments I have ever made, gave 1.97 hydrogen to 1 oxygen.

I shall close this subject, by presenting two tables of the elements of elastic fluids ; they are collected principally from the results already given in detail, with a few small alterations or corrections ; the utility of them to practical chemistry will be readily recognised.

Tables of the elements of elastic fluids; at a mean temperature and pressure.

(TABLE 1.)

Names of the gases.	Wt. of an atom	Wt. of 100 cubic inch. grs.	Specific gravity.	Diameter of an atom	No. of atoms in a given volume.
Atmospheric air	—	31	1.00	—	—
Hydrogen	1	2.5	.08	1.000	1000
Oxygen	7	34	1.10	.794	2000
Azote	5	30.2	.97	.747	2400
Muriatic acid	22	39.5	1.24	1.12	700
Ammonia	6	18.6	.60	.909	1330
Oxymur. acid	29	76	2.46	.981	1060
Nitrous gas	12	32.2	1.04	.980	1060
Nitrous oxide	17	50	1.60	.947	1180
Carbonic oxide	12.4	29	.94	1.020	910
Carbonic acid	19.4	47	1.52	1.00	1000
Sulphurous acid	27	71	2.30	.95	1170
Olefiant gas	6.4	29.5	.95	.81	1890
Carburetted hyd.	7.4	18.6	.60	1.00	1000
Sulphuretted hyd.	14	36	1.16	1.00	1000
Phosphur. hyd.	10	26	.84	1.00	1000
Superflu. of silex	75	130	4.20	1.15	658

(TABLE 2.)

Proportions of the constituent principles of compound gases.

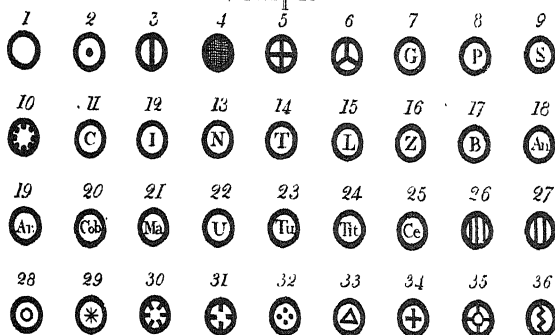
Names of the compound gases.	Constituent principles of 100 measures of the compound gases.		Constituent principles of 100 weight of the compound gases.	
	Measures.	Measures.		
Ammon. gas	52 azote	+ 133 hyd.	83 azote	+ 17 hyd.
Water	100 oxyg.	+ 200 hyd.*	87 oxy.	+ 12.5 hyd.
Nitrous gas	46 azote	+ 55 oxyg.	42 azote	+ 58 oxygen
Nitr. oxide	99 azote	+ 58 oxyg.	59 azote	+ 41 oxygen
Nitric acid	180 nit. gas	+ 100 oxy.	27 azote	+ 73 oxy.
Nitrous acid	360 nit. gas	+ 100 oxy.	33 azote	+ 67 oxy.
Oxym. acid	150 mur. acid	+ 50 oxy.	76 mur. acid	+ 24 oxy.
Sulphs. acid	100 oxygen	+ sulphur	52 oxy.	+ 48 sulphur
Sulphc. acid	100 sulphs. acid	+ 50 oxy.	79½ sul. acid	+ 20½ oxy.
Carb. oxide	47 oxy.	+ charcoal	55 oxy.	+ 45 charc.
Carb. acid	100 oxy.	+ charcoal	72 oxy.	+ 28 charc.
Carbur. hyd.	200 hydr.	+ 1 part char.	27 hyd.	+ 73 charc.
Olefiant gas	200 hydr.	+ 2 parts ch.	15 hyd.	+ 85 charc.
Sulph. hyd.	100 hydr.	+ sulphur	7 hyd.	+ 93 sulph.
Mur. of am.	100 mur. acid	+ 100 am.g.	65 mur. acid	+ 35 am. gas
Carb. of am.	100 carb. acid	+ 80 am.g.	76 carb. acid	+ 24 am. gas
Subc. of am.	100 carb. acid	+ 160 am.g.	61 carb. acid	+ 39 am. gas

* I believe 197 is nearer the truth.

ELEMENTS.

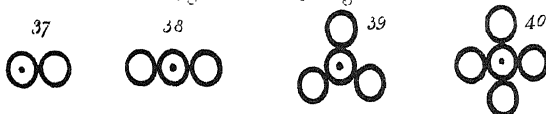
Simple

Plate 5

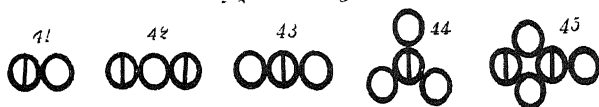


Compound

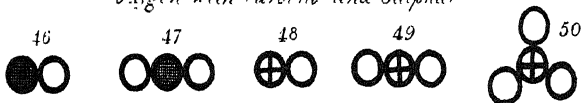
Oxygen with Hydrogen



Oxygen with Azote



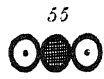
Oxygen with Carbone and Sulphur



Oxygen with phosph.



Hydrogen with Azote & Carbone

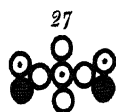
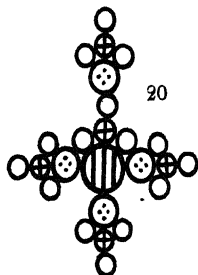


Hyd. with Sulph. & phosph.



Sulphur with phosph.

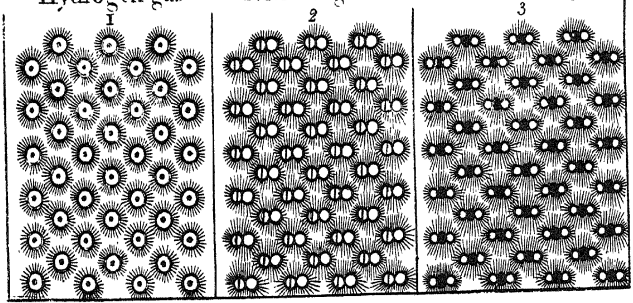




Hydrogen gas

Nitrous gas

Carbonic acid gas

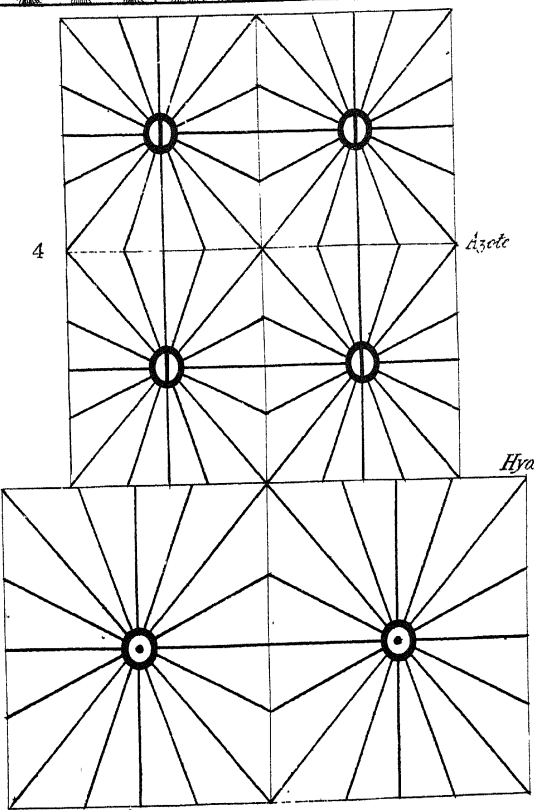


4

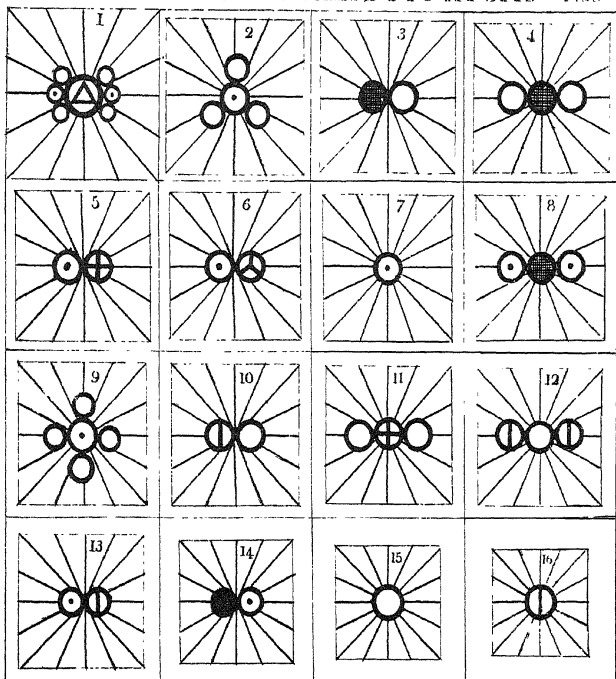
Azote

5

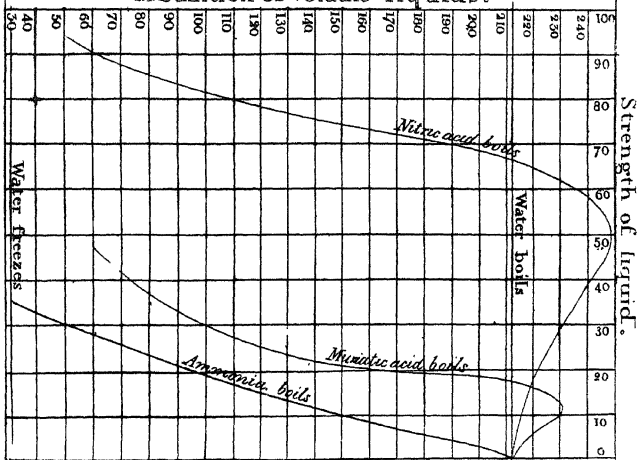
Hydrogen



DIAMETERS OF ELASTIC ATOMS *Plate 8*



Ebullition of volatile liquids.





3 8482 00547 7282

546 D15n

v.1, pt.1-2

Hunt Library
Carnegie Institute of Technology
Pittsburgh, Pennsylvania

UNIVERSAL
LIBRARY



138 232

UNIVERSAL
LIBRARY